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**QUARTERLY MONITORING REPORT  
4TH QUARTER 2000**

**L.E.CARPENTER & COMPANY  
WHARTON, NEW JERSEY**

**USEPA ID# NJD002168748**

February 2001

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*for*

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# Section 1

## Introduction

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RMT, Inc. (RMT), on behalf of our client, has prepared this Quarterly Monitoring Report for the L.E. Carpenter and Company (LEC) site ("the site" or "the subject site") located at 170 North Main Street, Wharton, New Jersey (Figure 1). Quarterly monitoring events are performed at the site to comply with paragraph 35 of the 1986 Administrative Consent Order (ACO) issued to LEC by the New Jersey Department of Environmental Protection (NJDEP). We provide a summary of activities completed during the fourth quarter of 2000, including routine quarterly groundwater monitoring and monthly free product recovery activities. In addition, this report includes summaries of additional site activities performed during fourth quarter of 2000, and activities scheduled for commencement during first quarter of 2001. We have certified this report in accordance with requirements outlined in N.J.A.C 7:26E(Appendix A).

RMT conducted the following tasks during the fourth quarter of 2000:

- Monthly mobile free product recovery using enhanced fluid recovery (EFR) or vacuum enhanced recovery (VER) techniques in accordance with the NJDEP approval letter dated August 20, 1997 (Ref. Section 2).
- Quarterly groundwater monitoring as required under the ACO (Ref. Sections 3 and 4).
- Ongoing preparation of responses to agency (NJDEP and USEPA) comments dated October 13, 2000 regarding the document entitled Workplan to Evaluate Additional Technologies to Enhance On-Site Free Product Recovery (RMT, August 15, 2000) (Ref. Section 5).
- Ongoing preparation of responses to agency (NJDEP and USEPA) comments dated December 21, 2000 regarding the document entitled Workplan for Delineating and Characterizing Elevated Lead Concentrations in Soil (RMT, September 6, 2000) (Ref. Section 5).

We provide a discussion of these activities in the referenced sections.

## Section 2

# Monthly EFR Activities

### 2.1 Introduction

In August 1997, the NJDEP approved the Remedial Action Plan (RAP) (RMT, Inc., February 1997) which described free product removal using enhanced fluid recovery (EFR) for the eastern portion of the subject site (east of the rail spur right-of-way). EFR is conducted by applying a vacuum to product recovery wells to primarily remove free phase product, in addition to limited volumes of contaminated groundwater and contaminant vapors, within vadose zone and capillary fringe soils. As the result of increased aeration, this procedure enhances any natural biodegradation that may be occurring in the soil and groundwater. The locations of the twenty-eight (28) EFR wells purged during each monthly EFR event and all groundwater monitoring wells are shown in Figure 2.

RMT arranged performance of monthly EFR events during the fourth quarter of 2000 on October 25, 2000, November 17, 2000, and December 15, 2000. We coordinated measurement of the free product thickness in each recovery well (where applicable), followed by EFR. Our EFR subcontractor (CEMCO) used the recorded free product measurements to determine the placement of the drop pipe that maximized free product recovery volumes. Table 1 lists apparent free product thickness measurements recorded during fourth quarter 2000. Severn Trent Services (groundwater monitoring subcontractor and certified laboratory) observed a measurable thickness of free phase product in 11 of the 72 locations monitored on October 30, 2000. Table 1 also provides a cumulative breakdown of EFR specific information such as minimum and maximum free product thickness levels (in feet), associated waste management costs, and extracted product (liquid and vapor phase) and groundwater volumes (in gallons) to date.

During fourth quarter 2000, EFR activities were conducted utilizing a Nortech, Inc. 55B vacuum head apparatus capable of producing a vacuum of 17-inches of mercury (in Hg) at 100 cubic feet per minute (cfm). This unit is connected to a fitted 55-gallon drum, and braced to a mobile 4-wheel drive vehicle. When compared to the previously utilized vacuum trucks, use of this system has enabled CEMCO to get closer to each individual EFR well head, minimizing potential losses in the system previously experienced due to the use of greater lengths of extraction hose, while maximizing the maneuverability of the drop pipe. Use of this system has resulted in a more efficient EFR event, minimizing the volume of groundwater extracted. The average ratio of extracted groundwater to free product over the fourth quarter of 2000 was

approximately 0.04 gallons/gallon. Before use of this method (November 1997 to December 1999), the ratio of extracted groundwater to free product was 4.7 gallons/gallon.

Once the extraction apparatus is full (approximately 55-gallons), the free product and limited volume of groundwater is transferred to an on-site 550-gallon aboveground storage tank (AST) equipped with secondary containment for satellite storage. The fluids generated during the September, October and November 2000 EFR events, including purged groundwater generated during groundwater monitoring activities, were managed by Cycle Chem/ Clean Venture on November 17<sup>th</sup>, 2000. A total of 225 gallons of fluids were removed from the site after the November 17<sup>th</sup>, 2000 event, and transported to the CycleChem/ Clean Venture disposal facility in Elizabeth, New Jersey.

## **2.2 Apparent Free Product Trends**

The following sections describe apparent product trends in the western, west-central, east-central, and eastern portions of the historic free product area. Apparent product refers to a volume (in gallons) of free product occupying the casings of each EFR well. Total apparent free product represents the sum of product volumes from each EFR well within all three segregated regions.

The apparent product thickness is not necessarily representative of the actual free product thickness or volume that exists within the formation. RMT previously evaluated actual free product thickness and volume in our report entitled Free Product Volume Analysis (May 2000).

### **2.2.1 Western Region of Free Product**

In the western portion of the free product area (EFR wells 1, 2, 3, 17, 18, 20, 21, and 28), there was a decrease in the total volume of apparent free product measured throughout the fourth quarter of 2000. Apparent free product volume decreased from 4.23 gallons in October 2000 to 3.22 gallons in December 2000. Most noticeable free product thickness decreases were found in EFR Wells 21 and 28. Apparent free product volume in the western region appears to have decreased throughout 2000 (see Appendix B).

### **2.2.2 West-Central Region of Free Product**

In the west-central portion of the free product area (EFR wells 4, 5, 6, 7, 19, 22, 23, 24, 25, 26, and 27), the total volume of apparent free product increased slightly throughout the fourth quarter of 2000. Apparent free product volume increased from 4.76 gallons in October 2000 to 5.53 gallons in December 2000. In general, apparent free product volume in the central region appears to be decreasing (see Appendix B).

### **2.2.3 East-Central Region of Free Product**

The total volume of apparent free product thickness increased only slightly in the east-central portion of the free product area (EFR wells 8, 9, 10, 11, 12, and 13). There was a slight increase in the total volume of apparent free product measured throughout fourth quarter 2000. Apparent free product volume increased from 5.64 gallons in October 2000 to 5.71 gallons in December 2000. In general, apparent free product volume in the eastern region appears to be decreasing (see Appendix B).

### **2.2.4 Eastern Region of Free Product**

There is no longer any measurable free product in the eastern portion of the free product area (EFR wells 14, 15, and 16).

### **2.2.5 Site Total Apparent Free Product Area**

The total apparent free product volume on the site, accounting for all 28 EFR wells, decreased slightly over the course of the fourth quarter from 14.63 gallons in October 2000 to 14.45 gallons in December 2000. The total apparent free product trend chart indicates a steady decrease in the volume of apparent free product existing on-site throughout the use of the monthly EFR (21.60 gallons in November 1997 to 14.45 gallons in December 2000). A cumulative breakdown of free product thickness and apparent free product volumes specific to each region is presented in Table 2. Additionally, trend charts for each free product region and for the site as a whole, that graphically display apparent free product volume fluctuations over time are presented in Appendix B. Figure 3 shows iso-thickness contours and the lateral extent of apparent free product on-site during October 2000. This figure incorporates apparent free product thickness measurements from both the groundwater monitoring event conducted by Severn Trent Services on October 30, 2000, and the October EFR event conducted on October 25, 2000.

## **2.3 Recovered Free Product Volume Estimations**

After the completion of each EFR event, the total volume of extracted fluid was determined by gauging the 55-gallon vacuum head drum previously mentioned in section 2.1 with an oil/water interface probe. The drum was allowed to stabilize for one hour prior to gauging to allow for separation of emulsified product resulting from aggressive recovery. Gauging was conducted on a level surface and recorded thicknesses were converted to volumes based on a conversion of 1.65 gallons per inch of fluid thickness in the 55-gallon drum. Recovered free product volume was determined by subtracting the volume of water from the total fluid

volume. Vapor phase product volume was estimated based on vacuum head airflow (in cfm) and vented contaminant concentrations (in ppm) obtained during extraction at each EFR well. The volume (combined liquid and vapor phase) of free product extracted during each month's EFR event is presented in Table 3.

During fourth quarter 2000, we removed a total of 132.52 gallons of total fluids (measurable free product, product vapor, and groundwater) during the EFR activities. Approximately 128.8 gallons were measurable free phase product as determined by vacuum head drum gauging and vapor phase volume calculations, and 3.72 gallons were groundwater. Since initiation in December 1997, site EFR activities have removed approximately 13,953 gallons of total fluids, of which, approximately 2,863 gallons was measurable free phase product. Reference Table 1 for a complete breakdown of EFR related information.

## Section 3

# Quarterly Groundwater Monitoring

Groundwater monitoring activities were conducted on October 30<sup>th</sup>, 2000, in accordance with the procedures contained in the NJDEP's "Field Sampling Procedures Manual" dated May 1992. Monitoring wells MW-4, MW-11D(R), MW-14I, MW-15S, MW-15I, MW-17S, MW-21, MW-22(R), and MW-25(R) were purged utilizing a peristaltic pump to remove at least three well volumes prior to sampling. During the well purge process, indicator parameters were monitored and recorded so that a representative sample of the formation water was collected for analysis. Monitoring well sample data for 4<sup>th</sup> quarter 2000 is presented as Appendix C. Once the wells were purged, samples were collected using Teflon coated plastic bailers. Monitoring wells were sampled and analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) and bis (2-ethylhexyl) phthalate (DEHP) per the current groundwater monitoring protocol presented as Table 4. Locations of the quarterly monitoring wells are shown on Figure 2.

A sample duplicate, a field blank and a trip blank were collected to satisfy quality control requirements. The trip blank was prepared by the laboratory and remained with the sample containers until the samples were returned to the laboratory. The duplicate was collected from monitoring well MW-4 (duplicate sample No. MW-4D) and analyzed for BTEX. The field blank was collected by pouring distilled water through a Teflon coated bailer to verify that the field equipment was not adversely impacting the samples and decontamination procedures were adequate. Any sampling equipment used at each well was decontaminated prior to each use utilizing a soap and water wash and distilled water rinse. No BTEX or DEHP concentrations were detected in either the trip or field blanks above method detection levels.

The results of the chemical analyses were compared to New Jersey Class IIa Groundwater Quality Standards (NJGWQS). The presence of BTEX and DEHP was not detected at concentrations above NJGWQS in samples collected from MW-4 and duplicate sample MW-4D, MW-11(DR) MW-14I, MW-15S, MW-15I, MW-17S, MW-21, and MW-25(R).

Agency comments regarding the review of the 1<sup>st</sup> Quarter 1999 Monitoring Report (NJDEP letter dated May 21, 1999) required that monitoring well MW-11(DR) be included in the quarterly groundwater monitoring protocol as the groundwater sample taken from this deep aquifer monitoring well exhibited a DEHP concentration of 64 µg/L. The agency stated that the DEHP detected at this location may have been the result of drag down during well installation. Subsequently, this location was sampled for DEHP during 3<sup>rd</sup> quarter 1999 and later sampled

for both DEHP and BTEX beginning in 4<sup>th</sup> quarter 1999. Sampling for both DEHP and BTEX at this location over the past five quarters has not revealed contaminant concentrations exceeding the NJGWQS. Subsequently, RMT on behalf of LEC requests that this sampling location be removed from the quarterly monitoring protocol.

Monitoring well MW-22(R) exhibited concentrations of total xylenes (6,200 µg/L) and ethylbenzene (1,200 µg/L), exceeding the NJGWQS of 40 µg/L and 700 µg/L respectively. DEHP was also detected at MW-22(R) at a concentration of 5,100 µg/L, exceeding the NJGWQS of 30 µg/L. However, concentrations of BTEX and DEHP at downgradient monitoring location MW-25(R) have not exceeded NJGWQS since 1997, and contaminant concentration further downgradient at MW-21 have never exceeded NJGWQS since sampling began at this location in 1<sup>st</sup> quarter 1999. We will continue to closely monitor the contaminant concentration-trend at all three locations. Concentration trends for contaminants of concern detected at MW-22(R) and MW-25(R) are presented as Appendix D.

RMT has summarized the historical groundwater monitoring data, including the results from the fourth quarter 2000 sampling event, on Table 5. We have included the corresponding analytical laboratory reports in Appendix E. Severn Trent Services of Edison, New Jersey performed all site sampling activities and laboratory analyses.

## Section 4

# Water Table Elevations

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On October 30, 2000, Severn Trent Services (Severn) measured static groundwater levels from 72 different locations throughout the site (not including the EFR wells). RMT used these data to calculate groundwater elevations and evaluate the groundwater flow pattern in the shallow aquifer system (see Table 6). Figure 4 displays the site-wide water table surface, and indicates that groundwater flow direction in the shallow aquifer east of the rail spur is similar to that observed historically (generally toward the east).

Figure 5 displays the elevations of the water table surface in the MW19/Hot Spot 1 area (northwest corner of the subject site). We include each specific measured groundwater elevation and show it next to each of the wells. The data show that groundwater flow direction in the shallow aquifer underlying this area is generally towards the east-northeast. Elevations measured in wells MW19-8, MW19-7, MW19-6, and MW19-2 control the bending of the contours where they are roughly perpendicular to the regional interceptor sewer that is located under Ross Street. This supports data that show the regional sewer line intercepts and locally controls shallow groundwater flow. The pattern of groundwater flow in this area has remained the same throughout 2000, including during periods of groundwater elevation fluctuations.

# Section 5

## Site Investigation and Remedial Actions

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The following section briefly outlines additional activities and scopes of work performed at various on-site areas of environmental concern during 4<sup>th</sup> quarter 2000, and summarizes future activities associated with each area.

### **5.1 MW19/Hot Spot 1 Area**

Final agency comments dated January 5, 2001 regarding the MW19/Hot Spot 1 Well Installation Workplan (RMT, Inc., October 26, 2000) have been received. Questions or concerns regarding the above-mentioned workplan will be addressed under separate cover during first quarter 2001.

### **5.2 Free Product Layer**

Final agency comments dated October 13, 2000 regarding the Workplan to Evaluate Additional Technologies to Enhance On-Site Free Product Recovery (RMT, Inc., August 15, 2000) have been received. RMT, on behalf of LEC, is in the process of preparing an addendum to the above-mentioned workplan to address all agency comments outlined in the October 13, 2000 NJDEP letter. We will present this addendum to both agencies for review during the first quarter of 2001.

### **5.3 Hot Spot B & C**

Final EPA comments dated December 21, 2000 regarding the Workplan for Delineating and Characterizing Elevated Lead Concentrations in Soil, (RMT, Inc., September 6, 2000) have been received. RMT, on behalf of LEC, is in the process of evaluating the comments outlined in the December 21, 2000 letter from NJDEP. However, we noted that NJDEP had no comments regarding our previous workplan in that letter.

### **5.4 Monitored Natural Attenuation (MNA)**

RMT, on behalf of LEC, is continuing the evaluation of MNA as a viable remedial alternative to *ex-situ* bioremediation and re-infiltration of dissolved phase groundwater impacted with BTEX and DEHP (1994 Record of Decision Alternative No. 4). RMT submitted a report entitled Evaluation of Remediation of Groundwater by Natural Attenuation (May 2000) concluding that

natural biodegradation of contaminants of concern (COCs) is occurring. As a result of the discussions during the August 4, 2000 conference call between LEC, RMT and the agencies, RMT is in the process of preparing a workplan to propose further groundwater investigation and continued monitoring to further establish the validity of this alternative at the LEC site.



## NOTE:

MAP OBTAINED FROM UNITED STATES  
GEOLOGICAL SURVEY DOVER, NEW  
JERSEY 7.5 MINUTE SERIES  
QUADRANGLE (TOPOGRAPHIC), 1981.



0 2000 4000  
SCALE: 1'=2000'

**SITE LOCATION MAP  
L.E. CARPENTER AND COMPANY  
WHARTON, NEW JERSEY**

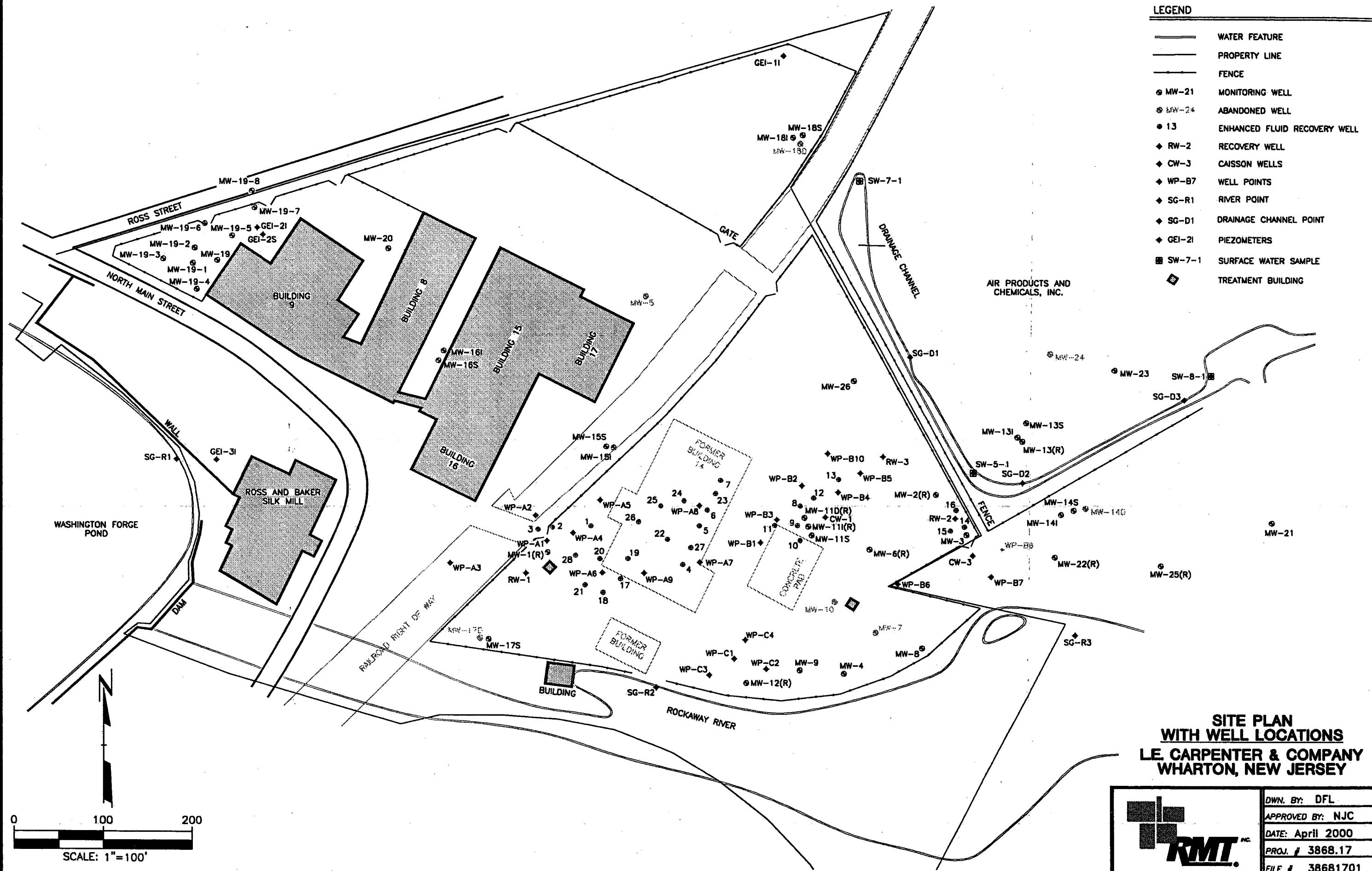
**RMT**

OWN. BY: DAY
APPROVED BY: G. Kenyon
DATE: 5/2/00
PROJ. # 3863.17
FILE # 38681704

FIGURE 1

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Operator Name:  
Scale:

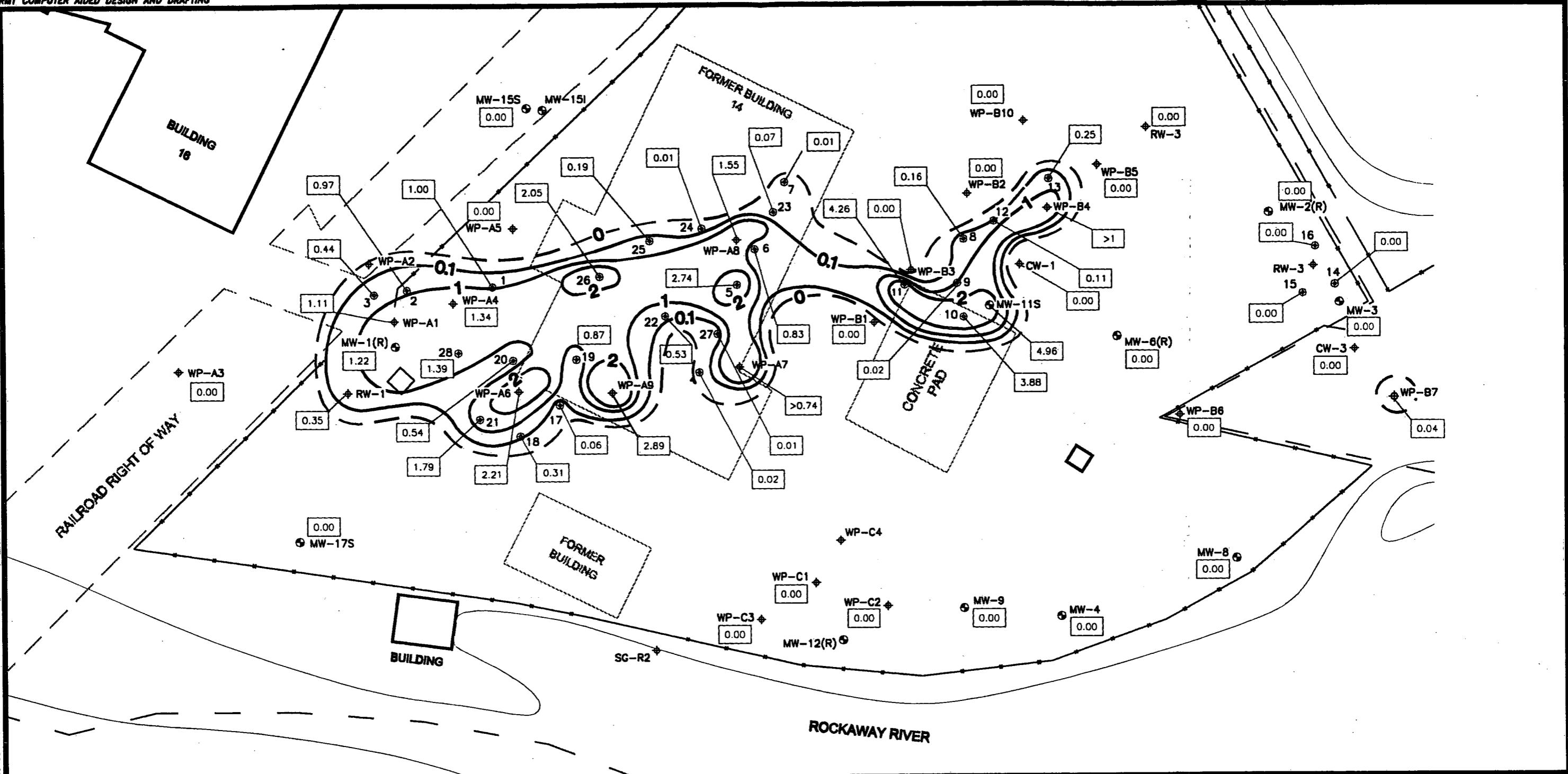
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Plot Date:  
Attached Xref's:



DWN. BY: DFL
APPROVED BY: NJC
DATE: April 2000
PROJ. # 3868.17
FILE # 38681701

FIGURE 2

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Tuesday, January 30, 2001  
3:02:48:39 PM  
No xref's Attached.  
Size:  
Plot Date:  
Plot Time:  
Attached Xref's:

**LEGEND**

- SURFACE WATER FEATURE
  - PROPERTY LINE
  - FENCE
  - PRODUCT THICKNESS CONTOURS (FT)
  - APPROXIMATE OUTER LIMIT OF FREE PRODUCT
  - ENHANCED FLUID RECOVERY WELL (EFR)
  - PRODUCT THICKNESS MEASURED IN WELL (FT)  
(MEASUREMENTS COLLECTED IN OCTOBER 2000)
- MW-13S • MONITORING WELL  
MW-24 • ABANDONED WELL  
RW-2 ♦ RECOVERY WELL  
CW-3 ♦ CAISSON WELLS  
WP-B7 ♦ WELL POINTS WITH ELEVATION  
◆ TREATMENT BUILDING
- 1.22

LE CARPENTER  
WHARTON, NEW JERSEY

**EXTENT AND THICKNESS OF FREE PRODUCT  
FOR 4th QUARTER 2000**

DRAWN BY:	LUCIDOS	PROJECT NUMBER:	3868.17
CHECKED BY:	JD	FILE NUMBER:	38681710.DWG
APPROVED BY:	JD	DATE:	JANUARY 2001



0 50' 100'  
SCALE IN FEET

**RMT** INC.

1143 HIGHLAND DRIVE, SUITE B  
ANN ARBOR, MI. 48108-2237  
P.O. BOX 991 48108-0991  
PHONE: 734-971-7080  
FAX: 734-971-9022

FIGURE 3

Dwg Name: J:\03868\17\3868171.dwg  
 Plot Name: Operator Name:  
 Scale: 1=100'

Date: Tuesday, January 30, 2001  
 Time: 2:13:29 PM  
 Attached Xrefs:

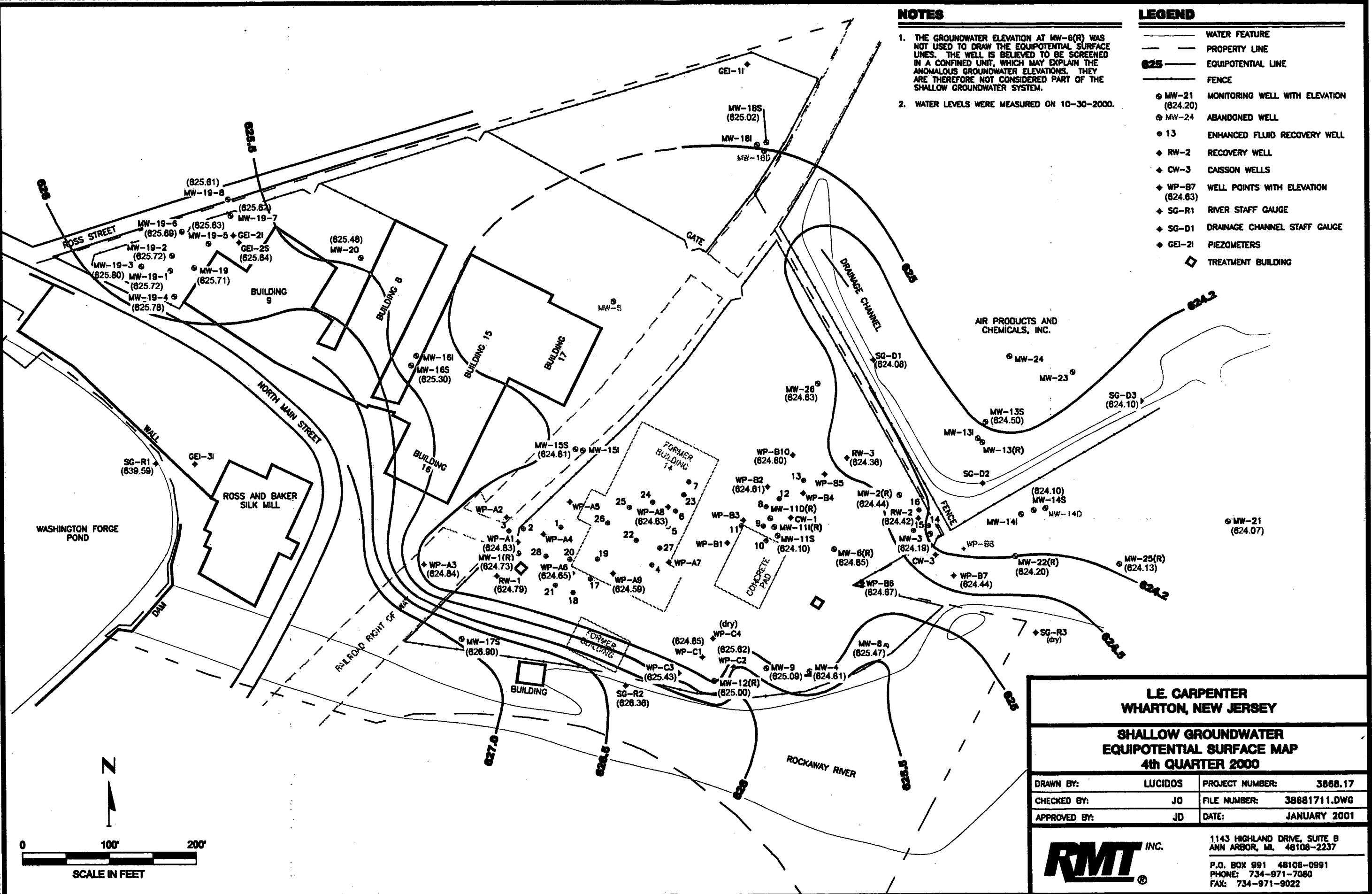
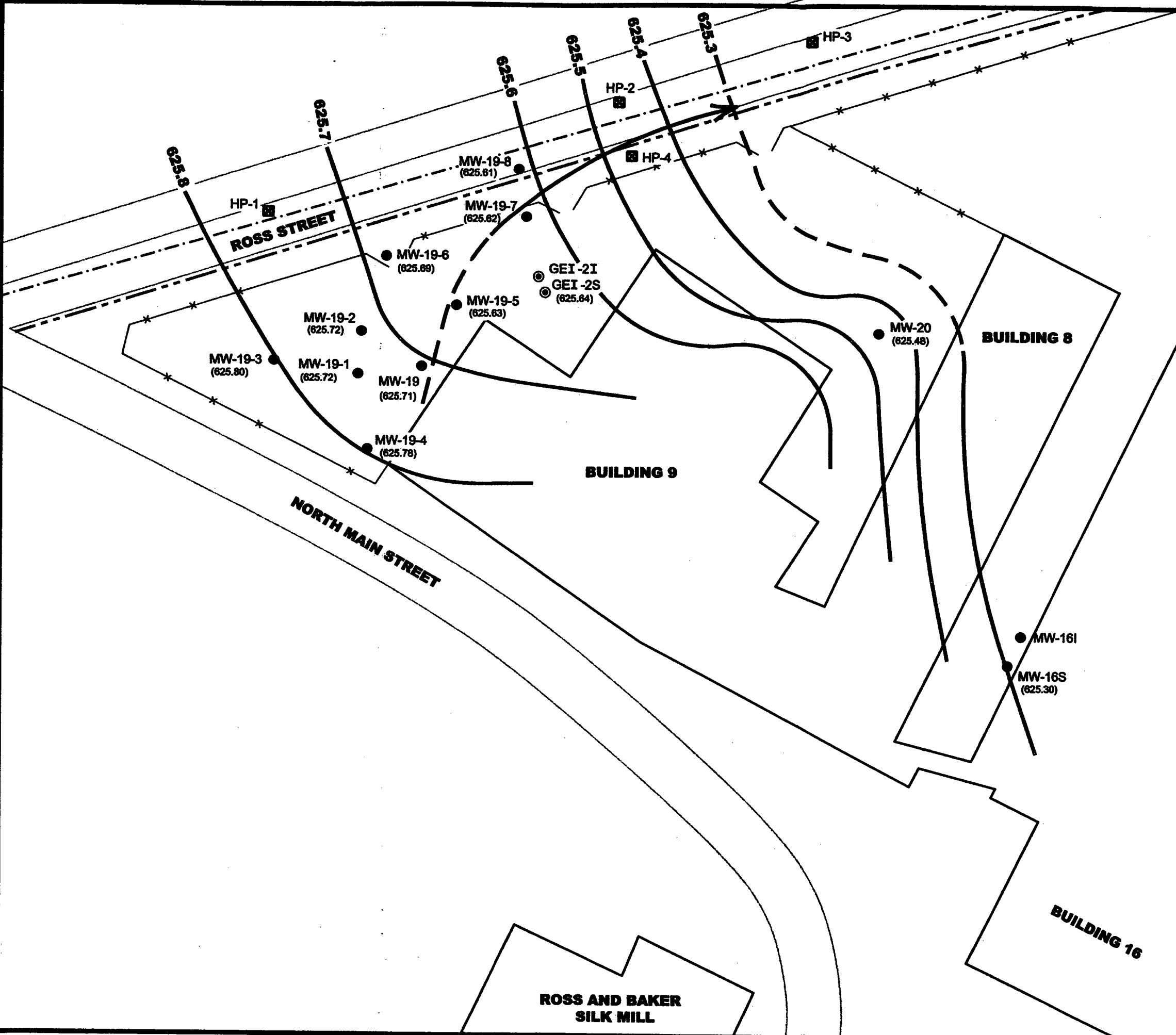


FIGURE 4

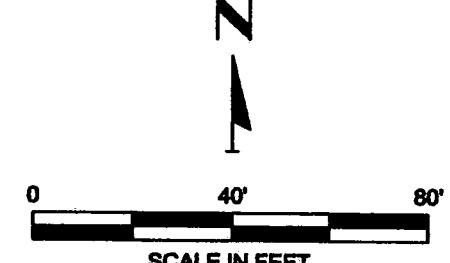
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 Plot #: 9.18  
 Attached Xref's: No xref's Attached.  
 Drawing Name: J:\U2800\11\386811712.dwg  
 Sheet #: 1-40



- - - APPROXIMATE PROPERTY LINE
- X - FENCE LINE
- - - APPROXIMATE LOCATION OF ROCKAWAY RIVER REGIONAL INTERCEPTOR SEWER
- 626** GROUNDWATER ELEVATION CONTOUR
- ← GROUNDWATER FLOW DIRECTION
- MW-19-7 (626.69) ● MONITORING WELL LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- GEI-2S (626.31) ○ GEOPROBE INSTALLED PIEZOMETER LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- HP-3 ■ APPROXIMATE LOCATIONS OF HYDROPUCH SAMPLES

**NOTES**

1. GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON OCTOBER 30, 2000.



L.E. CARPENTER  
WHARTON, NEW JERSEY

**MW-19 HOT SPOT SHALLOW GROUNDWATER ELEVATION CONTOURS FOR OCTOBER 2000**

DRAWN BY:	LUCIDOS	PROJECT NUMBER:	3868.17
CHECKED BY:	JDD	FILE NUMBER:	386811712.DWG
APPROVED BY:	JDD	DATE:	JANUARY 2001

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**Table 1**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Free Product Recovery - EFR Well # 1 - 28**

EFR Event Date Well No.	Development November 21, 1997 Feet of Product	EFR #1 December 9, 1997 Feet of Product	EFR #2 January 7, 1998 Feet of Product	EFR #3 January 22, 1998 Feet of Product	EFR #4 February 17, 1998 Feet of Product	EFR #5 March 13, 1998 Feet of Product	EFR #6 March 27, 1998 Feet of Product	EFR #7 April 24, 1998 Feet of Product	EFR #8 May 29, 1998 Feet of Product	EFR #9 June 30, 1998 Feet of Product	EFR #10 July 31, 1998 Feet of Product	EFR #11 <sup>(1)</sup> August 24, 1998 Feet of Product	EFR #12 September 17, 1998 Feet of Product	EFR #13 October 22, 1998 Feet of Product	EFR #14 November 20, 1998 Feet of Product	EFR #15 December 18, 1998 Feet of Product	EFR #16 January 13, 1999 Feet of Product
EFR-1	1.64	1.53	1.94	0.36	2.48	0.93	0.94	1.42	1.55	2.11	1.26	1.22	1.71	1.59	1.71	1.57	0.53
EFR-2	1.55	1.50	1.86	0.06	2.20	2.96	2.92	2.65	2.44	1.78	1.12	1.09	1.21	1.29	1.51	1.41	0.95
EFR-3	0.85	1.02	1.27	-	1.58	1.19	0.03	0.24	0.19	0.77	0.72	0.93	1.03	1.01	1.19	1.18	1.14
EFR-4	1.03	2.27	0.54	0.07	0.30	-	-	-	-	0.03	0.38	1.23	2.40	2.17	1.75	1.79	0.73
EFR-5	4.03	3.74	4.25	0.32	3.29	3.39	1.71	2.71	2.02	1.86	2.38	2.52	2.33	2.52	2.19	2.28	2.68
EFR-6	0.72	1.00	1.24	-	2.27	1.71	1.17	2.23	1.55	1.56	1.96	1.56	1.42	1.25	1.29	1.38	0.49
EFR-7	0.17	0.09	0.16	-	-	-	-	-	-	0.02	0.02	0.03	0.07	0.05	0.20	0.16	0.02
EFR-8	0.00	0.00	0.00	-	0.08	-	-	-	-	0.03	0.04	0.08	0.13	0.09	0.07	0.03	0.12
EFR-9	0.00	1.10	1.79	1.15	0.16	3.08	0.08	0.07	0.11	0.29	0.61	0.98	1.23	1.31	1.26	1.86	0.74
EFR-10	5.20	5.80	6.42	2.34	7.47	7.06	6.05	6.71	5.47	5.68	4.94	4.52	4.34	4.38	3.98	3.99	3.68
EFR-11	3.07	4.04	4.28	5.64	4.47	4.32	4.67	5.91	5.73	6.08	4.73	4.47	3.95	4.06	3.65	3.52	2.42
EFR-12	0.04	0.03	0.00	-	0.07	-	-	-	0.02	0.24	0.22	0.28	0.24	0.15	0.29	0.17	0.04
EFR-13	0.48	0.56	1.33	0.05	1.28	1.07	1.07	0.67	-	0.90	0.56	0.48	0.66	0.82	1.13	1.30	0.22
EFR-14	0.10	0.16	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EFR-15	0.09	0.12	0.27	-	0.06	-	-	-	-	0.03	0.02	0.03	0.03	0.12	0.12	0.32	0.11
EFR-16	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EFR-17	0.04	0.17	1.56	0.39	0.17	0.08	-	0.09	-	0.02	0.37	0.29	0.46	0.56	0.71	0.53	0.26
EFR-18	0.10	0.10	0.09	-	-	-	-	-	-	0.01	0.08	0.14	0.48	0.68	0.98	1.08	0.56
EFR-19	0.54	2.80	1.89	0.49	1.95	1.63	1.44	0.88	0.65	0.42	0.90	1.26	1.68	1.95	2.31	2.44	1.83
EFR-20	0.40	0.34	0.95	0.47	0.27	-	-	0.04	0.24	0.37	0.65	0.63	0.79	1.24	1.85	2.11	0.65
EFR-21	2.36	2.40	2.71	2.74	2.74	4.14	3.97	4.23	3.98	3.29	1.97	1.87	1.86	1.77	1.67	1.62	1.21
EFR-22	3.78	4.10	0.05	4.81	3.40	4.69	3.42	1.82	1.22	0.96	2.86	2.87	2.97	2.83	2.58	2.27	2.06
EFR-23	0.00	0.06	0.06	-	0.02	-	-	-	-	0.05	0.11	0.08	0.27	1.03	3.07	2.29	1.55
EFR-24	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-	-	0.03	0.12	0.14	0.38
EFR-25	2.95	3.00	3.55	0.26	4.15	3.11	0.72	0.82	0.79	0.78	0.60	0.41	0.29	0.41	1.33	1.56	1.05
EFR-26	2.20	2.05	2.66	0.29	2.30	2.12	1.43	1.32	1.95	1.21	2.06	1.58	1.17	1.24	1.08	1.09	0.73
EFR-27	0.15	0.02	2.71	0.02	0.74	-	0.03	-	0.02	0.33	0.45	1.49	0.54	0.47	0.51	0.09	-
EFR-28	2.20	2.30	1.78	0.48	2.60	3.20	3.48	4.40	3.16	2.61	1.47	1.73	1.69	1.83	1.79	1.74	1.03
MIN (ft)	0.00	0.00	0.00	0.02	0.02	0.08	0.03	0.03	0.02	0.01	0.02	0.03	0.03	0.03	0.07	0.03	0.02
MAX (ft)	5.20	5.80	6.42	5.64	7.47	7.06	6.05	6.71	5.73	6.08	4.94	4.52	4.34	4.38	3.98	3.99	3.68
Average (ft)	1.20	1.44	1.55	1.17	1.92	2.79	2.21	2.01	1.94	1.25	1.22	1.23	1.36	1.34	1.47	1.48	0.97
Total Free Product (ft)	33.69	40.30	43.36	19.94	44.05	44.68	33.10	36.24	31.07	31.16	30.38	30.73	33.90	34.92	38.30	38.36	25.27
Total Standing Free Product Volume (gal)	21.60	25.83	27.79	12.78	28.24	28.64	21.22	23.23	19.92	19.97	19.47	19.70	22.04	22.70	24.90	24.93	16.43
Estimated Total Free Product Removed (gal) <sup>(1)</sup> (Liquid and Vapor Phase Free Product Volume)	315.00	250.00	210.00	80.00	120.00	130.00	100.00	110.00	95.00	105.00	76.00	55.00	60.00	15.00	25.00	51.00	23.00
Estimated Total Fluids Removed (gal) (Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000																	
Vapor Phase Free Product Extraction Volume (gal) as of Jan 2000																	
Liquid Phase Free Product Extraction Volume (gal) as of Jan 2000																	
Groundwater Extraction Volume (gal) per each EFR Event <sup>(2)</sup> as of Jan 2000																	
Total EFR Extraction Volume (gal) (Total Volume: free product + groundwater + product vapor)	2350.00	1410.00	376.00	256.00	314.00	300.00	339.00	403.00	390.00	561.00	211.00	220.00	329.00	212.00	120.00	256.00	234.00
Estimated Volume Removed Resulting from Drum Purging (GW purge water) if applicable <sup>(3)</sup>						338	150	600	70	110	71	-	110	-	-	110	-
Total Volume Removed from Site (gal) (Manifested volume) <sup>(4)</sup>	2,350	1,410	376	256	314	638	489	1,003	460	671	282	220	439	212	120	256	234
Cumulative Total Free Product Removed (gal)	315	565	775	855	975	1,105	1,205	1,315	1,410	1,515	1,591	1,646	1,706	1,721	1,746	1,797	1,

**Table 1**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Free Product Recovery - EFR Well # 1 - 28**

EFR Event Date	EFR #17 February 18, 1999 Ft of Product	EFR #18 March 24, 1999 Ft of Product	EFR #19 April 19, 1999 Ft of Product	EFR #20 May 18, 1999 Ft of Product	EFR #21 June 22, 1999 Ft of Product	EFR #22 July 28, 1999 Ft of Product	EFR #23 <sup>(1)</sup> August 27, 1999 Ft of Product	EFR #24 September 22, 1999 Ft of Product	EFR #25 October 27, 1999 Ft of Product	EFR #26 November 30, 1999 Ft of Product	EFR #27 December 16, 1999 Ft of Product	EFR #28 January 28, 2000 Ft of Product	EFR #29 February 18, 2000 Ft of Product	EFR #30 March 24, 2000 Ft of Product	EFR #31 April 19, 2000 Ft of Product
Well No.															
EFR-1	1.79	3.68	1.13	1.09	1.15	1.49	1.27	1.94	1.63	1.47	1.20	1.22	0.85	1.86	1.59
EFR-2	1.40	2.42	1.46	1.22	0.92	1.21	1.00	0.63	1.35	1.28	1.40	0.06	1.04	2.25	2.00
EFR-3	1.01	1.63	0.36	0.25	0.86	0.88	1.03	0.74	0.69	0.47	0.02	0.51	0.07	0.08	0.09
EFR-4	0.10	0.14	0.08	0.05	0.03	0.44	0.99	0.51	0.11	0.03	0.58	0.51	0.48	0.11	0.11
EFR-5	3.47	6.15	2.65	2.61	2.66	2.66	1.57	1.77	3.23	2.99	1.27	2.95	2.46	2.91	2.54
EFR-6	0.84	0.88	0.61	1.07	1.16	1.51	0.91	0.15	0.86	0.63	0.33	1.07	0.77	0.29	0.31
EFR-7	0.04	0.04	0.07	0.02	0.08	0.28	0.05	0.01	0.07	0.04	0.47	0.15	0.02	0.35	0.01
EFR-8	-	0.03	0.03	0.03	0.09	0.39	0.27	0.09	0.13	0.05	0.11	0.05	0.06	0.08	0.03
EFR-9	0.49	0.06	0.11	0.32	0.49	1.16	0.56	0.41	0.28	0.10	0.15	0.13	0.08	0.19	0.02
EFR-10	5.79	5.52	4.97	4.23	3.71	3.63	2.47	3.02	5.18	3.95	3.07	4.50	3.55	3.50	4.50
EFR-11	4.69	2.84	2.02	2.48	3.28	2.78	1.57	1.93	3.20	3.11	1.07	3.44	4.95	2.41	2.95
EFR-12	0.11	0.05	0.02	0.02	0.10	0.30	0.20	0.03	0.09	0.67	0.01	0.03	0.49	0.46	0.10
EFR-13	1.19	0.15	0.49	0.50	0.44	1.33	1.01	0.74	0.78	0.57	0.26	0.36	0.34	0.48	0.47
EFR-14	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EFR-15	0.07	0.01	0.01	0.00	0.00	0.00	0.13	0.04	0.02	0.08	0.02	0.02	0.02	0.02	0.02
EFR-16	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EFR-17	0.08	0.06	0.06	0.08	0.12	0.39	0.36	0.10	0.06	0.24	0.25	0.11	0.32	0.04	0.16
EFR-18	0.11	-	0.06	0.16	0.46	0.96	1.37	0.61	0.36	0.77	0.05	0.20	0.05	0.12	0.04
EFR-19	1.68	0.52	0.44	0.52	1.10	2.05	2.02	0.51	1.54	0.84	0.69	1.67	1.73	0.25	0.60
EFR-20	1.33	0.88	0.43	0.89	0.87	1.59	1.86	0.47	1.92	1.36	0.75	1.08	2.58	0.64	0.42
EFR-21	1.43	2.62	2.35	1.49	1.46	1.57	1.04	1.01	2.32	1.40	1.70	1.92	1.34	3.04	2.86
EFR-22	0.84	0.34	0.95	1.39	1.93	1.47	1.41	0.17	2.22	1.76	0.53	0.82	0.58	0.09	0.16
EFR-23	0.91	0.47	0.22	0.25	0.45	2.13	1.03	0.12	0.53	0.64	0.24	0.23	0.31	0.46	0.06
EFR-24	0.06	0.00	0.00	0.00	0.08	0.08	0.05	0.00	0.04	0.13	0.11	0.07	0.58	0.02	0.02
EFR-25	1.75	1.19	1.08	0.76	0.54	1.74	1.48	0.21	0.39	0.19	0.05	0.31	0.39	0.58	0.21
EFR-26	0.55	0.45	0.75	1.29	1.28	1.23	0.72	0.29	0.52	0.94	0.59	1.54	1.10	1.33	1.68
EFR-27	0.12	0.00	0.00	0.02	0.03	0.17	0.21	0.06	0.01	0.01	0.01	0.02	0.14	0.20	0.01
EFR-28	1.29	1.71	1.65	1.46	1.25	1.67	1.78	0.38	2.19	0.96	1.42	1.33	1.00	2.30	2.42
MIN (ft)	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX (ft)	5.79	6.15	4.97	4.23	3.71	3.63	2.47	3.02	5.18	3.95	3.07	4.50	4.95	3.50	4.50
Average (ft)	1.25	1.22	0.79	0.79	0.88	1.18	0.94	0.57	1.06	0.88	0.58	0.87	0.89	0.85	0.84
Total Free Product (ft)	31.14	31.84	22.00	22.20	24.54	33.11	26.36	15.94	29.68	24.59	16.37	24.34	24.79	24.62	23.38
Total Standing Free Product Volume (gal)	20.24	20.70	14.30	14.43	15.95	21.52	17.13	10.36	19.29	15.98	10.64	15.82	16.11	16.00	15.20
Estimated Total Free Product Removed (gal) (Liquid and Vapor Phase Free Product Volume)	74.00	40.00	59.24	47.20	38.51	54.48	36.00	44.00	54.73	44.79	49.34	43.52	51.66	48.14	45.46
Estimated Total Fluids Removed (gal) (Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000												40.93	46.21	52.80	41.26
Vapor Phase Free Product Extraction Volume (gal) as of Jan 2000												6.55	7.93	10.19	5.85
Liquid Phase Free Product Extraction Volume (gal) as of Jan 2000												36.97	43.73	37.95	39.61
Groundwater Extraction Volume (gal) per each EFR Event <sup>(1)</sup> as of Jan 2000												3.96	2.48	14.85	1.65
Total EFR Extraction Volume (gal) (Total Volume: free product + groundwater + product vapor)	498.00	683.00	904.76	360.00	564.26	725.54	298.00	239.00	265.00	249.07	350.00	47.48	54.14	62.99	47.11
Estimated Volume Removed Resulting from Drum Purging (GW purge water) if applicable <sup>(1)</sup>	235	-	139	-	-	374	-	-	199	82	-	-	-	-	357
Total Volume Removed from Site (gal) (Manifested volume) <sup>(1)</sup>	733	683	1,044	360	564	1,100	298	239	464	331	350	-	-	-	538
Cumulative Total Free Product Removed (gal)	1,894	1,934	1,993	2,040	2,079	2,133	2,169	2,213	2,268	2,313	2,362	2,406	2,457	2,506	2,551
Extraction, Transportation & Disposal Cost <sup>(2)</sup>	\$ 1,641.56	\$ 1,703.44	\$ 2,049.75	\$ 930.31	\$ 1,598.13	\$ 2,165.75	\$ 2,162.12	\$ 995.81	\$ 1,288.50	\$ 1,028.93	\$ 968.87	\$ -	\$ -	\$ -	\$ 1,045.62
Unit Cost per gal <sup>(3)</sup>	\$ 2.24	\$ 2.49	\$ 1.96	\$ 2.58	\$ 2.83	\$ 1.97	\$ 2.26	\$ 4.17	\$ 2.78	\$ 3.11	\$ 2.77	\$ -	\$ -	\$	

**Table 1**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Free Product Recovery - EFR Well # 1 - 28**

EFR Event Date Well No.	EFR #32 May 18, 2000 Feet of Product	EFR #33 June 16, 2000 Feet of Product	EFR #34 July 18, 2000 Feet of Product	EFR #35 August 17, 2000 Feet of Product	EFR #36 September 18, 2000 Feet of Product	EFR #37 October 25, 2000 Feet of Product	EFR #38 November 17, 2000 Feet of Product	EFR #39 December 15, 2000 Feet of Product	EFR AVERAGES	EFR TOTALS
EFR-1	1.54	2.10	1.51	1.26	1.53	1.00	1.07	1.14		
EFR-2	1.64	1.89	1.40	0.36	1.08	0.97	1.09	0.76		
EFR-3	0.62	1.02	0.25	0.02	0.08	0.44	0.43	0.46		
EFR-4	0.41	0.22	0.05	0.02	0.02	0.02	0.05	0.21		
EFR-5	1.84	2.34	1.99	1.69	1.57	2.74	2.47	2.76		
EFR-6	0.49	0.27	0.54	0.29	0.55	0.83	0.79	0.96		
EFR-7	0.02	0.00	0.00	0.01	0.00	0.01	0.01	0.01		
EFR-8	0.05	0.03	0.02	0.01	0.01	4.26	0.02	0.06		
EFR-9	0.06	0.06	0.12	0.16	0.08	0.02	0.50	0.77		
EFR-10	1.36	2.50	3.09	0.75	2.76	3.88	3.27	4.05		
EFR-11	2.93	2.49	4.12	0.79	4.73	0.16	4.00	3.73		
EFR-12	0.19	0.01	0.01	0.00	0.03	0.11	0.04	0.02		
EFR-13	0.69	0.55	0.73	0.49	0.22	0.25	0.09	0.15		
EFR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
EFR-15	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
EFR-17	0.65	0.04	0.01	0.02	0.09	0.06	0.06	0.01		
EFR-18	0.32	0.01	0.06	0.16	0.08	0.31	0.31	0.20		
EFR-19	0.98	0.17	0.63	0.34	0.22	0.87	0.59	1.42		
EFR-20	0.54	0.33	0.30	0.39	0.45	0.54	0.11	0.37		
EFR-21	2.47	3.02	2.09	1.62	2.75	1.79	1.65	1.37		
EFR-22	0.05	0.05	0.01	0.18	0.06	0.53	2.14	1.50		
EFR-23	0.06	0.01	0.13	0.03	0.07	0.07	0.08	0.39		
EFR-24	0.03	0.00	0.00	0.00	0.01	0.01	0.01	0.04		
EFR-25	0.10	0.03	0.10	0.03	0.10	0.19	0.12	0.10		
EFR-26	2.02	1.44	2.25	1.38	2.01	2.05	1.73	1.10		
EFR-27	0.03	0.04	0.01	0.01	0.15	0.01	0.01	0.01		
EFR-28	1.81	2.63	1.72	2.48	2.02	1.39	1.36	0.64		
MIN (ft)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
MAX (ft)	2.93	3.02	4.12	2.48	4.73	4.26	4.00	4.05		
Average (ft)	0.75	0.76	0.76	0.45	0.74	0.80	0.80	0.79		
Total Free Product (ft)	20.91	21.30	21.14	12.49	20.67	22.51	22.35	22.23		
Total Standing Free Product Volume (gal)	13.59	13.85	13.74	8.12	13.44	14.63	14.53	14.45		
Estimated Total Free Product Removed (gal) <sup>(1)</sup> (Liquid and Vapor Phase Free Product Volume)	45.50	43.66	46.38	22.05	25.07	44.12	35.36	49.32	72	2,863
Estimated Total Fluids Removed (gal) (Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jun 2000	40.18	39.44	40.43	20.13	21.05	38.78	31.36	43.73	38	456
Vapor Phase Free Product Extraction Volume (gal) as of Jan 2000	6.31	5.05	7.60	5.22	5.26	6.58	5.65	6.42	7	79
Liquid Phase Free Product Extraction Volume (gal) as of Jan 2000	39.19	38.61	38.78	16.83	19.81	37.54	29.71	42.90	35	422
Groundwater Extraction Volume (gal) per each EFR Event <sup>(1)</sup> as of Jan 2000	0.99	0.53	1.65	3.30	1.24	1.24	1.65	0.83	3	35
Total EFR Extraction Volume (gal) (Total Volume: free product + groundwater + product vapor)	46.49	44.49	48.03	25.35	26.31	45.36	37.01	50.15	349	13,953
Estimated Volume Removed Resulting from Drum Purging (GW purge water) if applicable <sup>(1)</sup>			110			134			199	3,189
Total Volume Removed from Site (gal) (Manifested volume) <sup>(1)</sup>			250			225		In Satellite Storage <sup>(1)</sup>	545	16,909
Cumulative Total Free Product Removed (gal)	2,597	2,640	2,687	2,709	2,734	2,778	2,813	2,863	N/A	2,863
Extraction, Transportation & Disposal Cost <sup>(2)</sup>	\$			795.13	\$		762.31	\$	1,465.87	\$ 45,441.98
Unit Cost per gal <sup>(3)</sup>	\$			3.18	\$		3.39	\$	3.44	N/A

**TABLE 2**  
**L.E. CARPENTER - WHARTON, NEW JERSEY**  
**REGIONAL APPARENT FREE PRODUCT TRENDS**

THROUGH 4TH QUARTER 2000

EFR Event Date	21-Nov-97	09-Dec-97	07-Jan-98	16-Feb-98	16-Mar-98	27-Mar-98	24-Apr-98	29-May-98	30-Jun-98	31-Jul-98	24-Aug-98	17-Sep-98	22-Oct-98	20-Nov-98	18-Dec-98
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<b>Western Region of Free Product</b>	EFR-1	1.64	1.53	1.94	2.48	0.93	0.94	1.42	1.55	2.11	1.28	1.22	1.71	1.59	1.71	1.57
	EFR-2	1.55	1.50	1.86	2.20	2.96	2.92	2.65	2.44	1.78	1.12	1.09	1.21	1.29	1.51	1.41
	EFR-3	0.85	1.02	1.27	1.58	1.19	0.03	0.24	0.19	0.77	0.72	0.93	1.03	1.01	1.19	1.18
	EFR-17	0.04	0.17	1.56	0.17	0.08	0.00	0.09	0.00	0.02	0.37	0.29	0.46	0.56	0.71	0.53
	EFR-18	0.10	0.10	0.09	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.14	0.48	0.68	0.98	1.08
	EFR-20	0.40	0.34	0.95	0.27	0.00	0.00	0.04	0.24	0.37	0.65	0.63	0.79	1.24	1.85	2.11
	EFR-21	2.36	2.40	2.71	2.74	4.14	3.97	4.23	3.98	3.29	1.97	1.87	1.86	1.77	1.67	1.62
	EFR-28	2.20	2.30	1.78	2.60	3.20	3.48	4.40	3.16	2.61	1.47	1.73	1.69	1.83	1.79	1.74
	Total Free Product (ft)	9.14	9.36	12.16	12.04	12.50	11.34	13.07	11.56	10.96	7.66	7.90	9.23	9.97	11.41	11.24
	Total Free Product (gal)	5.86	6.00	7.79	7.72	8.01	7.27	8.38	7.41	7.03	4.91	5.06	6.00	6.48	7.42	7.31

<b>West-Central Region of Free Product</b>	EFR-4	1.03	2.27	0.54	0.30	0.00	0.00	0.00	0.03	0.38	1.23	2.40	2.17	1.75	1.79	
	EFR-5	4.03	3.74	4.25	3.29	3.39	1.71	2.71	2.02	1.86	2.38	2.52	2.33	2.52	2.19	2.28
	EFR-6	0.72	1.00	1.24	2.27	1.71	1.17	2.23	1.55	1.56	1.96	1.56	1.42	1.25	1.29	1.38
	EFR-7	0.17	0.09	0.16	0.00	0.00	0.00	0.00	0.02	0.02	0.03	0.03	0.07	0.05	0.20	0.16
	EFR-19	0.54	2.80	1.89	1.95	1.63	1.44	0.88	0.65	0.42	0.90	1.26	1.68	1.95	2.31	2.44
	EFR-22	3.78	4.10	0.05	3.40	4.69	3.42	1.82	1.22	0.96	2.86	2.87	2.97	2.83	2.58	2.27
	EFR-23	0.00	0.06	0.06	0.02	0.00	0.00	0.00	0.05	0.11	0.08	0.27	1.03	3.07	2.29	
	EFR-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.03	0.12	0.14	
	EFR-25	2.95	3.00	3.55	4.15	3.11	0.72	0.82	0.79	0.78	0.60	0.41	0.29	0.41	1.33	1.58
	EFR-26	2.20	2.05	2.66	2.30	2.12	1.43	1.32	1.95	1.21	2.06	1.58	1.17	1.24	1.08	1.09
	EFR-27	0.15	0.02	2.71	0.74	0.00	0.00	0.03	0.00	0.02	0.33	0.45	1.49	0.54	0.47	0.51
	Total Free Product (ft)	15.57	19.13	17.11	18.42	16.65	9.89	9.81	8.18	6.91	11.60	11.99	14.09	14.02	16.39	15.93
	Total Free Product (gal)	9.98	12.26	10.97	11.81	10.67	6.34	6.29	5.24	4.43	7.44	7.69	9.16	9.11	10.65	10.35

<b>East-Central Region of Free Product</b>	EFR-8	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.03	0.04	0.08	0.13	0.09	0.07	0.03	
	EFR-9	0.00	1.10	1.79	0.16	3.08	0.08	0.07	0.11	0.29	0.61	0.98	1.23	1.31	1.26	1.86
	EFR-10	5.20	5.80	6.42	7.47	7.06	6.05	6.71	5.47	5.68	4.94	4.52	4.34	4.38	3.98	3.99
	EFR-11	3.07	4.04	4.28	4.47	4.32	4.67	5.91	5.73	6.08	4.73	4.47	3.95	4.06	3.65	3.52
	EFR-12	0.04	0.03	0.00	0.07	0.00	0.00	0.00	0.02	0.28	0.22	0.28	0.24	0.15	0.29	0.17
	EFR-13	0.48	0.56	1.33	1.28	1.07	1.07	0.67	0.00	0.90	0.56	0.48	0.66	0.82	1.13	1.30
	Total Free Product (ft)	8.79	11.53	13.82	13.53	15.53	11.87	13.36	11.33	13.26	11.10	10.81	10.55	10.81	10.38	10.87
	Total Free Product (gal)	5.63	7.39	8.86	8.67	9.95	7.61	8.56	7.26	8.50	7.12	6.93	6.86	7.03	6.75	7.07

<b>Eastern Region of Free Product</b>	EFR-14	0.10	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	EFR-15	0.09	0.12	0.27	0.06	0.00	0.00	0.00	0.00	0.03	0.02	0.03	0.03	0.12	0.12	0.32
	EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Free Product (ft)	0.19	0.28	0.27	0.06	0.00	0.00	0.00	0.00	0.03	0.02	0.03	0.03	0.12	0.12	0.32
	Total Free Product (gal)	0.12	0.18	0.17	0.04	0.00	0.00	0.00	0.00							

**TABLE 2**  
**L.E. CARPENTER - WHARTON, NEW JERSEY**  
**REGIONAL APPARENT FREE PRODUCT TRENDS**

EFR Event Date	13-Jan-99	17-Feb-99	23-Mar-99	19-Apr-99	18-May-99	22-Jun-99	28-Jul-99	27-Aug-99	22-Sep-99	27-Oct-99	30-Nov-99	16-Dec-99	28-Jan-00	18-Feb-00	24-Mar-00
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Western Region of Free Product	EFR-1	0.53	1.79	3.68	1.13	1.09	1.15	1.49	1.27	1.94	1.63	1.47	1.20	1.22	0.85	1.86
	EFR-2	0.95	1.40	2.42	1.46	1.22	0.92	1.21	1.00	0.63	1.35	1.28	1.40	0.06	1.04	2.25
	EFR-3	1.14	1.01	1.63	0.36	0.25	0.86	0.88	1.03	0.74	0.69	0.47	0.02	0.51	0.07	0.08
	EFR-17	0.26	0.08	0.06	0.06	0.08	0.12	0.39	0.36	0.10	0.06	0.24	0.25	0.11	0.32	0.04
	EFR-18	0.56	0.11	0.00	0.06	0.16	0.46	0.96	1.37	0.61	0.36	0.77	0.05	0.20	0.05	0.12
	EFR-20	0.65	1.33	0.88	0.43	0.89	0.87	1.59	1.86	0.47	1.92	1.36	0.75	1.08	2.58	0.64
	EFR-21	1.21	1.43	2.62	2.35	1.49	1.46	1.57	1.04	1.01	2.32	1.40	1.70	1.92	1.34	3.04
	EFR-28	1.03	1.29	1.71	1.65	1.46	1.25	1.67	1.78	0.38	2.19	0.96	1.42	1.33	1.00	2.30
	Total Free Product (ft)	6.33	8.44	13.00	7.50	6.64	7.09	9.76	9.71	5.88	10.52	7.95	6.79	6.43	7.25	10.33
	Total Free Product (gal)	4.11	5.49	8.45	4.88	4.32	4.61	6.34	6.31	3.82	6.84	5.17	4.41	4.18	4.71	6.71

West-Central Region of Free Product	EFR-4	0.73	0.10	0.14	0.08	0.05	0.03	0.44	0.99	0.51	0.11	0.03	0.58	0.51	0.48	0.11
	EFR-5	2.68	3.47	6.15	2.65	2.61	2.66	2.66	1.57	1.77	3.23	2.99	1.27	2.95	2.46	2.91
	EFR-6	0.49	0.84	0.88	0.61	1.07	1.16	1.51	0.91	0.15	0.86	0.63	0.33	1.07	0.77	0.29
	EFR-7	0.02	0.04	0.04	0.07	0.02	0.08	0.28	0.05	0.01	0.07	0.04	0.47	0.15	0.02	0.35
	EFR-19	1.83	1.68	0.52	0.44	0.52	1.10	2.05	2.02	0.51	1.54	0.84	0.69	1.67	1.73	0.25
	EFR-22	2.06	0.84	0.34	0.95	1.39	1.93	1.47	1.41	0.17	2.22	1.76	0.53	0.82	0.58	0.09
	EFR-23	1.55	0.91	0.47	0.22	0.25	0.45	2.13	1.03	0.12	0.53	0.64	0.24	0.23	0.31	0.46
	EFR-24	0.38	0.06	0.00	0.00	0.00	0.08	0.08	0.05	0.00	0.00	0.04	0.13	0.11	0.07	0.58
	EFR-25	1.05	1.75	1.19	1.08	0.76	0.54	1.74	1.48	0.21	0.39	0.19	0.05	0.31	0.39	0.58
	EFR-26	0.73	0.55	0.45	0.75	1.29	1.28	1.23	0.72	0.29	0.52	0.94	0.59	1.54	1.10	1.33
	EFR-27	0.09	0.12	0.00	0.00	0.02	0.03	0.17	0.21	0.06	0.01	0.01	0.01	0.02	0.14	0.20
	Total Free Product (ft)	11.61	10.36	10.18	6.85	7.98	9.34	13.76	10.44	3.80	9.48	8.11	4.89	9.38	8.05	7.15
	Total Free Product (gal)	7.55	6.73	6.62	4.45	5.19	6.07	8.94	6.79	2.47	6.16	5.27	3.18	6.10	5.23	4.65

East-Central Region of Free Product	EFR-8	0.12	0.00	0.03	0.03	0.03	0.09	0.39	0.27	0.09	0.13	0.05	0.11	0.05	0.06	0.08
	EFR-9	0.74	0.49	0.06	0.11	0.32	0.49	1.16	0.56	0.41	0.28	0.10	0.15	0.13	0.08	0.19
	EFR-10	3.68	5.79	5.52	4.97	4.23	3.71	3.63	2.47	3.02	5.18	3.95	3.07	4.50	3.55	3.50
	EFR-11	2.42	4.69	2.84	2.02	2.48	3.28	2.78	1.57	1.93	3.20	3.11	1.07	3.44	4.95	2.41
	EFR-12	0.04	0.11	0.05	0.02	0.02	0.10	0.30	0.20	0.03	0.09	0.67	0.01	0.03	0.49	0.46
	EFR-13	0.22	1.19	0.15	0.49	0.50	0.44	1.33	1.01	0.74	0.78	0.57	0.26	0.36	0.34	0.48
	Total Free Product (ft)	7.22	12.27	8.65	7.64	7.58	8.11	9.59	6.08	6.22	9.66	8.45	4.67	8.51	9.47	7.12
	Total Free Product (gal)	4.69	7.98	5.62	4.97	4.93	5.27	6.23	3.95	4.04	6.28	5.49	3.04	5.53	6.16	4.63

Eastern Region of Free Product	EFR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-15	0.11	0.07	0.01	0.01	0.00	0.00	0.00	0.13	0.04	0.02	0.08	0.02	0.02	0.02	0.02
	EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Free Product (ft)	0.11	0.07	0.01	0.01	0.00	0.00	0.00	0.13	0.04	0.02	0.08	0.02	0.02	0.02	0.02
	Total Free Product (gal)	0.07	0.04	0.01	0.01	0.00	0.00	0.00</td								

**TABLE 2**  
**L.E. CARPENTER - WHARTON, NEW JERSEY**  
**REGIONAL APPARENT FREE PRODUCT TRENDS**

EPR Event Date	19-Apr-00	18-May-00	16-Jun-00	18-Jul-00	17-Aug-00	18-Sep-00	25-Oct-00	17-Nov-00	15-Dec-00	
<b>Western Region of Free Product</b>	EFR-1	1.59	1.54	2.10	1.51	1.26	1.53	1.00	1.07	1.14
	EFR-2	2.00	1.64	1.89	1.40	0.36	1.08	0.97	1.09	0.76
	EFR-3	0.09	0.62	1.02	0.25	0.02	0.08	0.44	0.43	0.46
	EFR-17	0.16	0.65	0.04	0.01	0.02	0.09	0.06	0.36	0.01
	EFR-18	0.04	0.32	0.01	0.06	0.16	0.08	0.31	0.31	0.20
	EFR-20	0.42	0.54	0.33	0.30	0.39	0.45	0.54	0.11	0.37
	EFR-21	2.86	2.47	3.02	2.09	1.62	2.75	1.79	1.65	1.37
	EFR-28	2.42	1.81	2.68	1.72	2.48	2.02	1.39	1.36	0.64
	<b>Total Free Product (ft)</b>	<b>9.58</b>	<b>9.59</b>	<b>11.09</b>	<b>7.34</b>	<b>6.31</b>	<b>8.08</b>	<b>6.50</b>	<b>6.38</b>	<b>4.95</b>
	<b>Total Free Product (gal)</b>	<b>6.23</b>	<b>6.23</b>	<b>7.21</b>	<b>4.77</b>	<b>4.10</b>	<b>5.25</b>	<b>4.23</b>	<b>4.15</b>	<b>3.22</b>
<b>West-Central Region of Free Product</b>	EFR-4	0.11	0.41	0.22	0.05	0.02	0.02	0.05	0.21	
	EFR-5	2.54	1.84	2.34	1.99	1.69	1.57	2.74	2.47	2.76
	EFR-6	0.31	0.49	0.27	0.54	0.29	0.55	0.83	0.79	0.96
	EFR-7	0.01	0.02	-	-	0.01	-	0.01	0.01	0.01
	EFR-19	0.60	0.98	0.17	0.63	0.34	0.22	0.87	0.59	1.42
	EFR-22	0.16	0.05	0.05	0.01	0.18	0.06	0.53	2.14	1.50
	EFR-23	0.06	0.06	0.01	0.13	0.03	0.07	0.07	0.08	0.39
	EFR-24	0.02	0.03	-	-	-	0.01	0.01	0.01	0.04
	EFR-25	0.21	0.10	0.03	0.10	0.03	0.10	0.19	0.12	0.10
	EFR-26	1.68	2.02	1.44	2.25	1.38	2.01	2.05	1.78	1.10
	EFR-27	0.01	0.03	0.04	0.01	0.01	0.15	0.01	0.01	0.01
	<b>Total Free Product (ft)</b>	<b>5.71</b>	<b>6.03</b>	<b>4.57</b>	<b>5.71</b>	<b>3.98</b>	<b>4.76</b>	<b>7.33</b>	<b>8.05</b>	<b>8.50</b>
	<b>Total Free Product (gal)</b>	<b>3.71</b>	<b>3.92</b>	<b>2.97</b>	<b>3.71</b>	<b>2.59</b>	<b>3.09</b>	<b>4.76</b>	<b>5.23</b>	<b>5.53</b>
<b>East-Central Region of Free Product</b>	EFR-8	0.03	0.05	0.03	0.02	0.01	0.01	0.16	0.02	0.06
	EFR-9	0.02	0.06	0.06	0.12	0.16	0.08	0.02	0.50	0.77
	EFR-10	4.50	1.36	2.50	3.09	0.75	2.76	3.88	3.27	4.05
	EFR-11	2.95	2.93	2.49	4.12	0.79	4.73	4.26	4.00	3.73
	EFR-12	0.10	0.19	0.01	0.01	0.00	0.03	0.11	0.04	0.02
	EFR-13	0.47	0.69	0.55	0.73	0.49	0.22	0.25	0.09	0.15
	<b>Total Free Product (ft)</b>	<b>8.07</b>	<b>5.28</b>	<b>5.64</b>	<b>8.09</b>	<b>2.20</b>	<b>7.83</b>	<b>8.68</b>	<b>7.92</b>	<b>8.78</b>
	<b>Total Free Product (gal)</b>	<b>5.25</b>	<b>3.43</b>	<b>3.67</b>	<b>5.26</b>	<b>1.43</b>	<b>5.09</b>	<b>5.64</b>	<b>5.15</b>	<b>5.71</b>
<b>Eastern Region of Free Product</b>	EFR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-15	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total Free Product (ft)</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	<b>Total Free Product (gal)</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL APPARENT FREE PRODUCT VOLUME (GAL)</b>		15.20	13.59	13.85	13.74	8.12	13.44	14.63	14.53	14.45

**TABLE 3**  
**L. E. CARPENTER - WHARTON, NEW JERSEY**

**MONTHLY EFR WELL GAUGING LOG**

**EFR #37**

DATE

**25-Oct-00**

WELL ID	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT TICKNESS (ft)
EFR-1	11.19	12.19	1.00
EFR-2	11.77	12.74	0.97
EFR-3	11.75	12.19	0.44
EFR-4	13.29	13.31	0.02
EFR-5	11.48	14.22	2.74
EFR-6	11.11	11.94	0.83
EFR-7	7.92	7.93	0.01
EFR-8	7.06	7.22	0.16
EFR-9	7.31	7.33	0.02
EFR-10	7.97	11.85	3.88
EFR-11	7.51	11.77	4.26
EFR-12	6.6	6.71	0.11
EFR-13	6.15	6.4	0.25
EFR-14	5.96	5.96	0.00
EFR-15	5.31	5.31	0.00
EFR-16	5.85	5.85	0.00
EFR-17	10.54	10.6	0.06
EFR-18	10.56	10.87	0.31
EFR-19	13.43	14.3	0.87
EFR-20	11.62	12.16	0.54
EFR-21	10.04	11.83	1.79
EFR-22	13.5	14.03	0.53
EFR-23	9.83	9.9	0.07
EFR-24	12.86	12.87	0.01
EFR-25	12.59	12.78	0.19
EFR-26	14.2	16.25	2.05
EFR-27	12.88	12.89	0.01
EFR-28	10.55	11.94	1.39

Total Volume

Of Free

Standing

Product (gal)

**14.63**

CEMCO FIELD TECHNICIAN: Gary Pizzuti

**TABLE 3**  
**L. E. CARPENTER - WHARTON, NEW JERSEY**

**MONTHLY EFR  
VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG**

**EFR #37**

**25-Oct-00**

WELL ID	EXTRACTION TIME		VAPOR PHASE CONCENTRATION		SYSTEM RECOVERY DATA			
	TOTAL TIME (min)	TOTAL TIME (hrs)	PPM	LEL (%)	VACUUM In Hg	CFM	lbs/hr	Total lbs
EFR-1	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-2	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-3	3.0	0.0500	6,560	100	17	100	32.01	1.6007
EFR-4	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-5	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-6	2.0	0.0333	2,034	31	17	100	9.92	0.3308
EFR-7	0.5	0.0083	0	0	17	100	0.00	0.0000
EFR-8	2.0	0.0333	4,789	73	17	100	23.37	0.7790
EFR-9	0.5	0.0083	394	6	17	100	1.92	0.0160
EFR-10	15.0	0.2500	3,411	52	17	100	16.65	4.1619
EFR-11	15.0	0.2500	4,789	73	17	100	23.37	5.8426
EFR-12	1.0	0.0167	66	1	17	100	0.32	0.0053
EFR-13	1.0	0.0167	0	0	17	100	0.00	0.0000
EFR-14	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-15	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-16	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-17	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-18	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-19	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-20	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-21	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-22	5.0	0.0833	6,560	100	17	100	32.01	1.0671
EFR-23	2.0	0.0333	6,560	100	17	100	32.01	0.0000
EFR-24	0.5	0.0083	0	100	17	100	0.00	0.0000
EFR-25	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-26	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-27	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-28	4.0	0.0667	6,560	100	17	100	32.01	2.1343
Total EFR Time (hrs)	1.8833	Avg ppm	5173.45				TOTAL (LBS)	51.4202
							TOTAL VAPOR PHASE VOLUME (GAL)	6.5850

Where:

ppm <sub>v</sub> =	Parts per Million by Volume
Flow =	Cubic feet per minute (CFM) 350
Molar Mass (MM) =	Molecular Weight (lb/lb-mole) = 292 (2)
IGC =	Ideal Gas Constant (359 ft <sup>3</sup> /lb-mole) = 359
LEL =	Free Product Mixture = 0.656 (1)
SG =	Specific Gravity = 0.9363 (3)

**NOTE** PPM = (% LEL on Meter) × (LEL of Product Mixture) × (1,000,000)

(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-1S; MW-6R; WP-85 & WP-B4)

Analyte LELs: DEHP @ 0.3%; Ethylbenzene @ 1%; Xylenes @ 1.1%

**NOTE** (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-1S; MW-6R; WP-85 & WP-B4)

Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2

(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (\text{ppm}_v \times (60 \text{ min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359 \text{ ft}^3/\text{lb-mole}))$$

Free Product & Groundwater Gauging (55-Gal Drum)	
Product Thickness (in)	22.75
Groundwater Thickness (in)	0.75
Conversion @ 1.65 gal/inch	1.65
Total Product Volume (gal)	37.54
Total Groundwater Volume (gal)	1.24
Ratio Groundwater to Free Product (gal/gal)	0.03

	Y (gal)
Total Recovered Groundwater Volume (gal)	1.24
Total Recovered Free Product Volume (gal)	37.54
Total Recovered Fluids Volume (gal)	38.78
<b>TOTAL EFR PRODUCT VOLUME</b>	<b>44.12 GAL</b>

Date	25-Oct-00
Project #	3868.18
Subcontractor	CEMCO
Vac Head Utilized	NORTECH Corp. 551B

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

**TABLE 3**  
**L. E. CARPENTER - WHARTON, NEW JERSEY**

**MONTHLY EFR WELL GAUGING LOG**

**EFR #38**

**DATE**

**17-Nov-00**

WELL ID	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT THICKNESS (ft)
EFR-1	11.26	12.33	1.07
EFR-2	11.86	12.95	1.09
EFR-3	11.81	12.24	0.43
EFR-4	13.33	13.38	0.05
EFR-5	11.6	14.07	2.47
EFR-6	11.18	11.97	0.79
EFR-7	7.19	7.2	0.01
EFR-8	7.15	7.17	0.02
EFR-9	7.41	7.91	0.50
EFR-10	8.07	11.34	3.27
EFR-11	7.6	11.6	4.00
EFR-12	6.67	6.71	0.04
EFR-13	6.21	6.3	0.09
EFR-14	6.02	6.02	0.00
EFR-15	5.21	5.21	0.00
EFR-16	5.9	5.9	0.00
EFR-17	10.62	10.98	0.36
EFR-18	10.59	10.9	0.31
EFR-19	13.51	14.1	0.59
EFR-20	11.7	11.81	0.11
EFR-21	10.15	11.8	1.65
EFR-22	13.51	15.65	2.14
EFR-23	9.86	9.94	0.08
EFR-24	12.98	12.99	0.01
EFR-25	12.7	12.82	0.12
EFR-26	14.27	16.05	1.78
EFR-27	12.97	12.98	0.01
EFR-28	10.68	12.04	1.36

Total Volume

Of Free

Standing

Product (gal)

**14.53**

**CEMCO FIELD TECHNICIAN:** Gary Pizzuti

**TABLE 3**  
**L. E. CARPENTER - WHARTON, NEW JERSEY**

**MONTHLY EFR  
VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG**

**EFR #38**

**17-Nov-00**

WELL ID	EXTRACTION TIME		VAPOR PHASE CONCENTRATION		SYSTEM RECOVERY DATA			Total lbs
	TOTAL TIME (min)	TOTAL TIME (hrs)	PPM	LEL (%)	VACUUM In Hg	CFM	lbs/hr	
EFR-1	5.0	0.0833	6,560	100	17	100	32.01	2,6679
EFR-2	5.0	0.0833	6,560	100	17	100	32.01	2,6679
EFR-3	5.0	0.0833	6,560	100	17	100	32.01	2,6679
EFR-4	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-5	15.0	0.2500	6,560	100	17	100	32.01	8.0036
EFR-6	2.0	0.0333	2,034	31	17	100	9.92	0.3308
EFR-7	0.5	0.0083	0	0	17	100	0.00	0.0000
EFR-8	0.5	0.0083	4,789	73	17	100	23.37	0.1948
EFR-9	1.0	0.0167	394	6	17	100	1.92	0.0320
EFR-10	15.0	0.2500	3,411	52	17	100	16.65	4.1619
EFR-11	15.0	0.2500	4,789	73	17	100	23.37	5.8426
EFR-12	0.5	0.0083	66	1	17	100	0.32	0.0027
EFR-13	1.0	0.0167	0	0	17	100	0.00	0.0000
EFR-14	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-15	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-16	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-17	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-18	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-19	3.0	0.0500	6,560	100	17	100	32.01	1.6007
EFR-20	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-21	5.0	0.0833	6,560	100	17	100	32.01	2,6679
EFR-22	5.0	0.0833	6,560	100	17	100	32.01	2,6679
EFR-23	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-24	0.5	0.0083	0	100	17	100	0.00	0.0000
EFR-25	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-26	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-27	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-28	4.0	0.0667	6,560	100	17	100	32.01	2.1343
Total EFR Time (hrs)	1.6500	Avg ppm	5173.45				TOTAL (LBS)	44.1797
							TOTAL VAPOR PHASE VOLUME (GAL)	5.6577

Where:

ppm =	Parts per Million by Volume
Flow =	Cubic feet per minute (CFM)
Molar Mass (MM) =	292 (2)
IGC =	Ideal Gas Constant (359 ft <sup>3</sup> /lb-mole) = 359
LEL =	Free Product Mixture = 0.656 (1)
SG =	Specific Gravity = 0.9363 (3)

**NOTE** (1) PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)

(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4). Analyte LELs: DEHP @ 0.3%; Ethylbenzene @ 1%; Xylenes @ 1.1%

**NOTE** (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4). Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2

(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (\text{ppm} \times (60 \text{ min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359 \text{ ft}^3/\text{lb-mole}))$$

Free Product & Groundwater Gauging (55-Gal Drum)	
Product Thickness (in)	18.00
Groundwater Thickness (in)	1.00
Conversion @ 1.65 gal/inch	1.65
Total Product Volume (gal)	29.70
Total Groundwater Volume (gal)	1.65
Ratio Groundwater to Free Product (gal/gal)	0.06

	Y (gal)
Total Recovered Groundwater Volume (gal)	1.65
Total Recovered Free Product Volume (gal)	29.70
Total Recovered Fluids Volume (gal)	31.35
<b>TOTAL EFR PRODUCT VOLUME</b>	<b>35.36 GAL</b>

Date	25-Oct-00
Project #	3868.18
Subcontractor	CEMCO
Vac Head Utilized	NORTECH Corp. 551B

CEMCO Field Technician Gary Pizzuti  
RMT Project Manager Nick Clevett

**TABLE 3**  
**L. E. CARPENTER - WHARTON, NEW JERSEY**

**MONTHLY EFR WELL GAUGING LOG**

**EFR #39**

**DATE**

**15-Dec-00**

WELL ID	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT THICKNESS (ft)
EFR-1	11.16	12.3	1.14
EFR-2	11.79	12.55	0.76
EFR-3	11.73	12.19	0.46
EFR-4	13.24	13.45	0.21
EFR-5	11.44	14.2	2.76
EFR-6	11.08	12.04	0.96
EFR-7	6.71	6.72	0.01
EFR-8	7.01	7.07	0.06
EFR-9	7.27	8.04	0.77
EFR-10	7.93	11.98	4.05
EFR-11	7.52	11.25	3.73
EFR-12	6.57	6.59	0.02
EFR-13	6.12	6.27	0.15
EFR-14	4.91	4.91	0.00
EFR-15	4.78	4.78	0.00
EFR-16	5.5	5.5	0.00
EFR-17	10.55	10.56	0.01
EFR-18	10.5	10.7	0.20
EFR-19	13.41	14.83	1.42
EFR-20	11.53	11.9	0.37
EFR-21	10.11	11.48	1.37
EFR-22	13.5	15	1.50
EFR-23	9.61	10	0.39
EFR-24	12.87	12.91	0.04
EFR-25	12.6	12.7	0.10
EFR-26	14.25	15.35	1.10
EFR-27	12.82	12.83	0.01
EFR-28	10.66	11.3	0.64

Total Volume  
Of Free  
Standing  
Product (gal)  
**14.45**

CEMCO FIELD TECHNICIAN: Gary Pizzuti

**TABLE 3**  
**L. E. CARPENTER - WHARTON, NEW JERSEY**

**MONTHLY EFR  
VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG**

**EFR #39**

**15-Dec-00**

WELL ID	EXTRACTION TIME		VAPOR PHASE CONCENTRATION		SYSTEM RECOVERY DATA			
	TOTAL TIME (min)	TOTAL TIME (hrs)	PPM	LEL (%) <sup>(4)</sup>	VACUUM In Hg	CFM	lbs/hr	Total lbs
EFR-1	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-2	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-3	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-4	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-5	15.0	0.2500	6,560	100	17	100	32.01	8.0036
EFR-6	5.0	0.0833	4,914	75	17	100	23.98	1.9985
EFR-7	0.5	0.0083	3,113	47	17	100	15.19	0.1266
EFR-8	0.5	0.0083	2,135	33	17	100	10.42	0.0868
EFR-9	3.0	0.0500	1,497	23	17	100	7.31	0.3653
EFR-10	15.0	0.2500	4,753	72	17	100	23.20	5.7989
EFR-11	15.0	0.2500	5,534	84	17	100	27.01	6.7521
EFR-12	0.5	0.0083	1,741	27	17	100	8.50	0.0708
EFR-13	0.5	0.0083	805	12	17	100	3.93	0.0327
EFR-14	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-15	0.0	0.0000	155	2	17	100	0.76	0.0000
EFR-16	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-17	1.0	0.0167	6,560	100	17	100	32.01	0.5336
EFR-18	2.0	0.0333	6,560	100	17	100	32.01	1.0671
EFR-19	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-20	3.0	0.0500	6,560	100	17	100	32.01	1.6007
EFR-21	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-22	10.0	0.1667	6,560	100	17	100	32.01	5.3357
EFR-23	2.0	0.0333	6,149	94	17	100	30.01	1.0002
EFR-24	0.5	0.0083	0	73	17	100	0.00	0.0000
EFR-25	4.0	0.0667	6,560	100	17	100	32.01	2.1343
EFR-26	5.0	0.0833	6,560	100	17	100	32.01	2.6679
EFR-27	0.5	0.0083	6,560	100	17	100	32.01	0.2668
EFR-28	5.0	0.0833	6,560	100	17	100	32.01	2.6679
<b>Total EFR Time (hrs)</b>	<b>1.7667</b>	<b>Avg ppm.</b>	<b>5488.17</b>				<b>TOTAL (LBS)</b>	<b>50,1137</b>
							<b>TOTAL VAPOR PHASE VOLUME (GAL)</b>	<b>6,4176</b>

Where:

ppm =	Parts per Million by Volume
Flow =	Cubic feet per minute (CFM) 350
Molar Mass (MM) =	Molecular Weight (lb/lb-mole) = 292 (2)
IGC =	Ideal Gas Constant (359 ft <sup>3</sup> /lb-mole) = 359
LEL =	Free Product Mixture = 0.656 (1)
SG =	Specific Gravity = 0.9363 (3)

**NOTE** PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)

(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-1S; MW-6R; WP-B5 & WP-B4)

Analyte LELs: DEHP @ 0.3%; Ethylbenzene @ 1%; Xylenes @ 1.1%

**NOTE** (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-1S; MW-6R; WP-B5 & WP-B4)

Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2

(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

(4) LEL readings were estimated during this EFR event due to inclement weather. Estimated readings represent averages from the previous 11 months.

$$\text{Pounds/Hr (lbs/hr)} = (\text{ppm}_v \times (60 \text{ min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359 \text{ ft}^3/\text{lb-mole}))$$

Free Product & Groundwater Gauging (55-Gal Drum)	
Product Thickness (in)	26.00
Groundwater Thickness (in)	0.50
Conversion @ 1.65 gal/inch	1.65
Total Product Volume (gal)	42.90
Total Groundwater Volume (gal)	0.83
Ratio Groundwater to Free Product (gal/gal)	0.02

	Y (gal)
Total Recovered Groundwater Volume (gal)	0.83
Total Recovered Free Product Volume (gal)	42.90
Total Recovered Fluids Volume (gal)	43.73
<b>TOTAL EFR PRODUCT VOLUME</b>	<b>49.32 GAL</b>

Note: Temp. 10 F, Winds 20 mph (LEL not functioning properly)

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

Date	15-Dec-00
Project #	3868.18
Subcontractor	CEMCO
Vac Head Utilized	NORTECH Corp. 551B

**TABLE 4**  
**L.E. CARPENTER - WHARTON, NEW JERSEY**  
**REVISED QUARTERLY MONITORING PROTOCOL**  
*Per NJDEP Letter Dated Aug 17, 1999*

Monitoring Well	Bottom of Well (ft)	Analytical Parameters	Rational	Comments
MW-14I	40.96', 2"	BTEX <sup>(1)</sup> DEHP <sup>(2)</sup>	Analytical results will identify the migration of the dissolved groundwater plume in the Intermediate Aquifer Zone downgradient of the site (Wharton Enterprise property)	Original Monitoring Well
MW-15S	17.47', 4"	BTEX <sup>(1)</sup> DEHP <sup>(2)</sup>	Analytical results will identify if the dissolved groundwater plume is migrating through this portion of the shallow aquifer zone (on the rail spur right-of-way)	Original Monitoring Well
MW-15I	38.34', 2"	BTEX <sup>(1)</sup> DEHP <sup>(2)</sup>	Analytical results will identify the migration of the dissolved groundwater plume through the Intermediate Aquifer Zone in the is area (on rail spur right-of-way)	Original Monitoring Well
MW-22R	11', 2"	BTEX <sup>(1)</sup> DEHP <sup>(2)</sup>	Analytical results will identify the movement of the dissolved groundwater plume in the shallow aquifer zone downgradient of the site (Wharton Enterprise property).	Original Monitoring Well
MW-25R	11', 2"	BTEX <sup>(1)</sup> DEHP <sup>(1)</sup>	Analytical results will identify the movement of the dissolved groundwater plume in the shallow aquifer zone downgradient of the site. East of MW-22R (Wharton Enterprise property).	DEHP sampling required quarterly as opposed to semi annually per Nov 23, 1998 NJDEP Letter.
MW-17S <sup>(3)</sup>	13.4', 4"	BTEX DEHP	Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone.	Original Monitoring Well
MW-4	27', 2"	BTEX <sup>(1)</sup> DEHP <sup>(2)</sup>	Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone (south portion of subject site, bordering on the Rockaway River)	Original Monitoring Well
MW-11D(R)	161'	BTEX <sup>(1)</sup> DEHP <sup>(1)</sup>	Analytical results from this well identify potential contamination of deep aquifer. This well lies in the center of the free product plume.	New well added to monitoring protocol as of May 21, 1999 NJDEP Letter (review of 1st quarter 1999 monitoring report). Well exhibited DEHP contamination potentially as the result of draw down during well installation. Well will be sampled for both monitoring program parameters (BTEX & DEHP) per NJDEP letter dated Aug 17, 1999. As of 4th Quarter 2000 (1 year of BTEX and DEHP sampling), approval was requested from NJDEP and USEPA to remove this well from the quarterly sampling program.
MW-21	15.0'	BTEX <sup>(1)</sup> DEHP <sup>(1)</sup>	Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone. Additionally, data from this well is used to track the potential migratory trend from MW-25 (Eastern most portion of the subject site)	New well added to monitoring protocol as of Nov 23, 1998 NJDEP Letter.

NOTES

(1) Sample Collected Every Quarter

(2) Sample Collected Bi-annually, 2nd and 4th quarter.

(3) Well sampled bi-annually, 2nd and 4th quarter.

QA/QC PROTOCOL

One (1) field blank will be collected for each parameter per each event (an additional 8 samples - 4 BTEX and 4 DEHP)

One (1) trip blank will be collected, alternating parameters per each event (an additional 4 samples - 2 BTEX and 2 DEHP)

One (1) duplicate sample will be collected from alternating wells and analyzed for alternating parameters (2 BTEX and 2 DEHP)

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30					
MW-4	1995	1	ND	26	ND	32	25,000	NO	NO	NO	NO	YES
		2	ND	16	ND	13	46,000	NO	NO	NO	NO	YES
		3	ND	9.7	ND	8.7	NS	NO	NO	NO	NO	-
		4	ND	8.8	ND	11	17,000	NO	NO	NO	NO	YES
	1996	1	ND	24	ND	47	NS	NO	NO	NO	NO	-
		2	NS	NS	NS	NS	NS	--	--	--	--	-
		3	ND	6.8	ND	4.3	NS	NO	NO	NO	NO	-
		4	ND	2.3	ND	ND	11,000	NO	NO	NO	NO	YES
	1997	1	ND	3.5	ND	1.8	NS	NO	NO	NO	NO	-
		2	ND	1.2	ND	4.2	120	NO	NO	NO	NO	YES
		3	ND	2.2	ND	12.6	NS	NO	NO	NO	NO	-
		4	NS	NS	NS	NS	NS	--	--	--	--	-
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		2	ND	1.0	ND	1.4	710	NO	NO	NO	NO	YES
		3	ND	1.9	ND	1.2	NS	NO	NO	NO	NO	-
		4	ND	9.3	ND	3.3	650	NO	NO	NO	NO	YES
	1999	1	ND	1.1	ND	2.5	NS	NO	NO	NO	NO	-
		2	ND	0.66	ND	ND	3,000	NO	NO	NO	NO	YES
		2 <sup>duplicate</sup>	ND	0.43	ND	ND	4,400	NO	NO	NO	NO	YES
		3	ND	3.10	ND	2.9	NS	NO	NO	NO	NO	-
		4	ND	0.51	ND	ND	4,000	NO	NO	NO	NO	YES
	2000	1	ND	0.54	ND	1.6	NS	NO	NO	NO	NO	-
		2	ND	0.3	ND	ND	480	NO	NO	NO	NO	YES
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	0.41	210	NO	NO	NO	NO	YES
		4 <sup>duplicate</sup>	ND	ND	ND	0.33	NS	NO	NO	NO	NO	-

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30					
<b>MW-11(DR) <sup>(2)(3)</sup></b>	1999	1	ND	ND	ND	ND	64	NO	NO	NO	NO	YES
		1 <sup>duplicate</sup>	ND	ND	ND	ND	20	NO	NO	NO	NO	NO
		2	NS	NS	NS	NS	NS	--	--	--	--	--
		3 <sup>(3)</sup>	NS	NS	NS	NS	59	--	--	--	--	YES
		3 <sup>duplicate</sup>	NS	NS	NS	NS	13	--	--	--	--	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	Field ID: MW-11DD	2 <sup>duplicate</sup>	ND	ND	ND	ND	NR	NO	NO	NO	NO	#REF!
		3	ND	ND	ND	ND	3.4	NO	NO	NO	NO	#REF!
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30					
<b>MW-14I</b>	1995	1	ND	0.4	ND	1.2	140	NO	NO	NO	NO	YES
		2	ND	ND	ND	ND	1.6	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	2.6	NO	NO	NO	NO	NO
	1996	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		2	NS	NS	NS	NS	NS	-	-	-	-	-
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	2.7	NO	NO	NO	NO	NO
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		2	ND	ND	ND	ND	1.6	NO	NO	NO	NO	NO
		3	1.2	22.1	ND	176	NS	YES	NO	NO	YES	-
		4	NS	NS	NS	NS	NS	-	-	-	-	-
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		2	ND	0.34	ND	2	24	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30					
MW-15S	1995	1	ND	ND	ND	ND	2.4	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	1996	1	ND	33	ND	83	NS	NO	NO	NO	YES	--
		2	NS	NS	NS	NS	NS	--	--	--	--	--
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	ND	0.21	ND	1.7	ND	NO	NO	NO	NO	NO
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		2	ND	ND	ND	ND	1.2	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	NS	NS	NS	NS	NS	--	--	--	--	--
	1998	1	ND	ND	1.4	ND	NS	NO	NO	NO	NO	--
		2	ND	ND	ND	1.3	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJVGS)			1	700	1,000	40	30					
<b>MW-15I</b>	1995	1	ND	ND	ND	ND	250	NO	NO	NO	NO	YES
		2	ND	ND	ND	ND	7.2	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	ND	ND	ND	ND	2.8	NO	NO	NO	NO	NO
	1996	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		2	NS	NS	NS	NS	NS	--	--	--	--	--
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	ND	ND	ND	ND	1.7	NO	NO	NO	NO	NO
		4 <sup>duplicate</sup>	ND	ND	ND	ND	1.9	NO	NO	NO	NO	NO
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		2	ND	ND	ND	ND	2.2	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	NS	NS	NS	NS	NS	--	--	--	--	--
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		2	ND	ND	ND	ND	1.9	NO	NO	NO	NO	NO
		2 <sup>duplicate</sup>	ND	ND	ND	ND	3.8	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	ND	ND	ND	0.53	11	NO	NO	NO	NO	NO
		4 <sup>duplicate</sup>	ND	0.2	ND	0.8	9.8	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		2	ND	ND	ND	ND	4.8	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?				
	YEAR	QUARTER	Benzene	Ethybenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethybenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30					
<b>MW-17S<sup>(4)</sup></b>	1995	1	ND	0.6	0.3	1.9	11	NO	NO	NO	NO	NO
		2	0.2	ND	0.18	ND	ND	NO	NO	NO	NO	NO
		3	NS	NS	NS	NS	NS	--	--	--	--	--
		4	ND	ND	ND	0.63	ND	NO	NO	NO	NO	NO
	1996	1	NS	NS	NS	NS	NS	--	--	--	--	--
		2	NS	NS	NS	NS	NS	--	--	--	--	--
		3	NS	NS	NS	NS	NS	--	--	--	--	--
		4	ND	ND	ND	ND	1.5	NO	NO	NO	NO	NO
	1997	1	NS	NS	NS	NS	NS	--	--	--	--	--
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	--
		3	NS	NS	NS	NS	NS	--	--	--	--	--
		4	NS	NS	NS	NS	NS	--	--	--	--	--
	1998	1	NS	NS	NS	NS	NS	--	--	--	--	--
		2	ND	ND	ND	1.2	6.1	NO	NO	NO	NO	NO
		3	NS	NS	NS	NS	NS	--	--	--	--	--
		4	ND	ND	ND	ND	6	NO	NO	NO	NO	NO
	1999	1	NS	NS	NS	NS	NS	--	--	--	--	--
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	NS	NS	NS	NS	NS	--	--	--	--	--
		4	ND	ND	ND	ND	40	NO	NO	NO	NO	YES
	2000	1	NS	NS	NS	NS	NS	--	--	--	--	--
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	NS	NS	NS	NS	NS	--	--	--	--	--
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30					
<b>MW-21<sup>(1)</sup></b>	1999	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	6	NO	NO	NO	NO	NO
		1 <sup>duplicate</sup>	NS	NS	NS	NS	ND	--	--	--	--	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)		1		700		1,000	40					
MW-22(R)	1995	1	ND	57	ND	260	6,500	NO	NO	NO	YES	YES
		2	ND	311	ND	955	380	NO	NO	NO	YES	YES
		3	ND	171	ND	693	NS	NO	NO	NO	YES	-
		4	ND	123	ND	494	320	NO	NO	NO	YES	YES
	1996	1	NS	NS	NS	NS	NS	-	-	-	-	-
		2	NS	NS	NS	NS	NS	-	-	-	-	-
		3	ND	359	ND	1,320	NS	NO	NO	NO	YES	-
		4	ND	320	ND	1,330	ND	NO	NO	NO	YES	NO
	1997	1	NS	NS	NS	NS	NS	-	-	-	-	-
		2	ND	5,730	ND	32,900	7,500	NO	YES	NO	YES	YES
		3	ND	11,400	348	66,000	NS	NO	YES	NO	YES	-
		4	NS	NS	NS	NS	NS	-	-	-	-	-
	1998	1	ND	4,070	348	20,600	NS	NO	YES	NO	YES	-
		2	ND	2,260	ND	11,300	5,800	NO	YES	NO	YES	YES
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		3 <sup>duplicate</sup>	ND	2,510	ND	11,000	NS	NO	YES	NO	YES	-
		4	ND	1,650	ND	7,230	1,100	NO	YES	NO	YES	YES
	1999	1	ND	18	ND	84	NS	NO	NO	NO	YES	-
		2	ND	1,600	ND	7,600	670	NO	YES	NO	YES	YES
		3	ND	1,200	42	5,200	NS	NO	YES	NO	YES	-
		4	ND	810	ND	3,300	1200	NO	YES	NO	YES	YES
		4 <sup>duplicate</sup>	ND	840	ND	3,400	1600	NO	YES	NO	YES	YES
	2000	1	ND	360	ND	1,400	NS	NO	NO	NO	YES	-
Dilution Factor 50		2	ND	820	ND	3,600	92	NO	YES	NO	YES	YES
Dilution Factor 200		3	ND	1,000	ND	4,800	NS	NO	YES	NO	YES	-
Dilution Factor 50 and 250 for DEHP and BTEX respectively		4	ND	1,200	ND	6,200	5100	NO	YES	NO	YES	YES

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS ?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30					
MW-25(R)	1995	1	NS	NS	NS	NS	NS	-	-	-	-	-
		2	ND	ND	ND	ND	1.6	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	68	NO	NO	NO	NO	YES
	1996	1	NS	NS	NS	NS	NS	-	-	-	-	-
		2	NS	NS	NS	NS	NS	-	-	-	-	-
		3	ND	0.34	ND	2.2	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		2	ND	13.5	ND	89	63	NO	NO	NO	YES	YES
		3	ND	4.1	ND	30.7	NS	NO	NO	NO	NO	-
		4	NS	NS	NS	NS	NS	-	-	-	-	-
	1998	1	ND	0.33	ND	1.5	NS	NO	NO	NO	NO	-
		1 duplicate	ND	0.39	ND	0.94	NS	NO	NO	NO	NO	-
		2	ND	ND	ND	ND	5.3	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	1.9	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		2	ND	ND	ND	14	ND	NO	NO	NO	NO	NO
		3	ND	0.39	ND	1.4	9.6	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	Field ID: MW-25RD	3 duplicate	NS	NS	NS	NS	ND	-	--	--	--	NO
		4	ND	0.33	ND	1.1	3.4	NO	NO	NO	NO	NO

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30					
<b>Trip Blank</b>	1995	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		4	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
	1996	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		2	NS	NS	NS	NS	NS	—	—	—	—	—
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		4	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
	1997	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		4	NS	NS	NS	NS	NS	—	—	—	—	—
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		4	ND	ND	ND	NS	1.3	NO	NO	NO	—	NO
	1999	1	ND	ND	ND	NS	ND	NO	NO	NO	—	NO
		2	ND	ND	ND	NS	ND	NO	NO	NO	—	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
	2000	1	NS	NS	NS	NS	ND	—	—	—	—	NO
		1	NS	NS	NS	NS	ND	—	—	—	—	NO
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	—
		3	NS	NS	NS	NS	ND	—	—	—	—	NO
		4	ND	ND	ND	ND	NS	NO	NO	NO	NO	—

**TABLE 5**  
**L.E. CARPENTER - Wharton, New Jersey**  
**Quarterly Groundwater Monitoring Data**

MONITORING WELLS	SAMPLING DATE		CHEMICAL ANALYSIS RESULTS					ABOVE NJGWQS?				
	YEAR	QUARTER	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)	Benzene	Ethylbenzene	Toluene	Total Xylenes	bis-2-Ethylhexylphthalate (DEHP)
			ug/l	ug/l	ug/l	ug/l	ug/l					
NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30					
<b>Field Blank</b>	1995	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		2	ND	0.73	ND	ND	1.3	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	1996	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		2	NS	NS	NS	NS	NS	--	--	--	--	-
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	1997	1	ND	ND	0.2	ND	NS	NO	NO	NO	NO	-
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	NS	NS	NS	NS	NS	--	--	--	--	-
	1998	1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		2	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		3	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		4	ND	ND	ND	ND	1.3	NO	NO	NO	NO	NO
	1999	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
	2000	1	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		1	ND	ND	ND	ND	NS	NO	NO	NO	NO	-
		1	NS	NS	NS	NS	3.2	--	--	--	--	NO
		2	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		3	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO
		4	ND	ND	ND	ND	ND	NO	NO	NO	NO	NO

**LEGEND**

ug/l = micrograms per liter

NJGWQS = New Jersey Groundwater Quality Standards

ROD = Record of Decision

NA = Not Applicable

NS = Not Sampled

ND = No Detection

Duplic = Duplicate sample

NR = Not Run

Values in **BOLD FONT** are above BOTH the NJDEP NJGWQS and the ROD Discharge Criteria

- Used when comparison against known standards does not apply as the well was not sampled (NS) for a specific

**Sampling Notes:**

(1) MW-21 Quarterly sampling required for both DEHP and BTEX as of NJDEP letter dated Nov 23, 1998

(2) MW-11(R) &amp; MW-11(DR) sampled for both DEHP and BTEX per NJDEP letter dated Nov 23, 1998 (one time sample round- baseline concentration)

(3) MW-11D required to be sampled quarterly per NJDEP letter dated August 17, 1999. Third quarter 1999 sampling was performed

prior to receiving the NJDEP letter. Subsequently, the well was only sampled for DEHP. Starting 4th quarter 1999, MW-11D will be sampled for both DEHP and BTEX.

(4) Well sampled Biannually - 2nd and 4th Quarter Only as of the beginning of 1998

**TABLE 6**  
**Water Level Elevations - 4th QUARTER 2000**  
**L.E. Carpenter, Wharton, New Jersey**

WELL LOCATION	WELL TYPE	BASELINE LOCATION		WELL INSTALLATION AND CONSTRUCTION INFORMATION <sup>(a)</sup>									GEODETIC LOCATION		ELEVATIONS (FT. MSL)			QUARTERLY MEASUREMENT INFORMATION <sup>(a)</sup>									
				MANAGING CONSULTANT	INSTALLATION DATE	TOTAL WELL DEPTH (FT)	WELL DIAMETER (IN)	SCREEN MATERIAL	SLOT SIZE (IN)	TOP OF SCREEN (FT)	BOTTOM OF SCREEN (FT)	SCREENED INTERVAL (FT)	AQUIFER SYSTEM	LATITUDE	LONGITUDE	GROUND	OUTER CASING	INNER WELL	MEAS. DATE	PRODUCT DEPTH	WATER ELEVATION	WATER ELEVATION	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ELEVATIONS <sup>(a)</sup>			
CW-1	Caisson Well	North	162.39	East	203.83	ROY F. WESTON	-	-	-	-	-	-	-	40° 54' 14.2"	74° 34' 34.7"	630.83	634.35		30-Oct-00	-	8.41	-	622.42	-	-		
CW-3	Caisson Well	North	198.46	East	373.37	ROY F. WESTON	-	-	-	-	-	-	-	40° 54' 13.8"	74° 34' 32.5"	628.63	633.30		30-Oct-00	-	8.38	-	620.25	-	-		
GEI-1I	Piezometer	North	607.06	West	69.57	ROY F. WESTON	April to October 1989	44.34	2.00	PVC	0.02	31.62	41.62	10.00	I	40° 54' 19.3"	74° 34' 35.3"	628.44	630.93	630.78	30-Oct-00	-	5.72	-	625.06	-	-
GEI-2I	Piezometer	North	168.56	West	516.79	ROY F. WESTON	April to October 1989	46.28	2.00	PVC	0.02	31.50	41.50	10.00	I	40° 54' 17.4"	74° 34' 43.1"	635.92	638.35	638.20	30-Oct-00	-	12.18	-	626.02	-	-
GEI-2S	Piezometer	North	164.27	West	507.48	ROY F. WESTON	April to October 1989	22.21	2.00	PVC	0.02	10.00	20.00	10.00	S	40° 54' 17.3"	74° 34' 43.0"	635.46	637.87	637.67	30-Oct-00	-	12.03	-	625.64	-	-
GEI-3I	Piezometer	South	86.67	West	441.14	ROY F. WESTON	April to October 1989	53.29	2.00	PVC	0.02	30.00	40.00	10.00	I	40° 54' 14.8"	74° 34' 43.7"	637.56	639.99	639.85	30-Oct-00	-	14.41	-	625.44	-	-
MW-1(R)	Monitoring Well	South	13.7	West	61.04	ROY F. WESTON	February 3, 1995	22.50	4.00	STEEL	0.01	7.00	22.50	15.50	S	40° 54' 13.8"	74° 34' 38.8"	635.79	635.78	635.47	30-Oct-00	10.66	11.88	624.81	623.59	1.22	624.73
MW-2(R)	Monitoring Well	North	241.17	East	304.79	ROY F. WESTON	January 30, 1995	13.00	2.00	PVC	0.01	2.00	12.00	10.00	S	40° 54' 14.4"	74° 34' 33.1"	629.06	632.28	632.14	30-Oct-00	-	7.70	-	624.44	-	-
MW-3	Monitoring Well	North	216.23	East	356.38	WEHRAN ENG.	May 15, 1980	27.00	2.00	STEEL	0.01	1.50	27.00	25.50	S	40° 54' 14.0"	74° 34' 32.6"	628.64	632.27	632.56	30-Oct-00	-	8.37	-	624.19	-	-
MW-4 <sup>(a)</sup>	Monitoring Well	North	13.34	East	300.92	WEHRAN ENG.	May 20, 1980	27.00	2.00	STEEL	0.01	1.50	27.00	25.50	S	40° 54' 12.4"	74° 34' 34.4"	628.86	632.31	632.50	30-Oct-00	-	7.89	-	624.61	-	-
MW-6(R)	Monitoring Well	North	151.9	East	264.4	ROY F. WESTON	January 25, 1995	10.98	2.00	PVC	0.02	0.98	10.98	10.00	S	40° 54' 13.8"	74° 34' 34.1"	629.82	632.64	632.42	30-Oct-00	-	7.57	-	624.85	-	-
MW-8 <sup>(a)</sup>	Monitoring Well	North	78.56	East	367.34	GROUNDWATER TECHNOLOGIES	1983	19.00	2.00	STEEL	0.02	0.00	19.00	19.00	S	40° 54' 12.7"	74° 34' 33.3"	627.99	630.56	628.79	30-Oct-00	-	3.32	-	625.47	-	-
MW-9 <sup>(a)</sup>	Monitoring Well	South	4.77	East	252.41	GROUNDWATER TECHNOLOGIES	1983	20.50	2.00	STEEL	0.02	0.50	20.00	19.50	S	40° 54' 12.5"	74° 34' 35.1"	629.21	631.69	630.18	30-Oct-00	-	5.09	-	625.09	-	-
MW-11S	Monitoring Well	North	137.25	East	199.33	ROY F. WESTON	April to October 1989	14.73	4.00	STEEL	0.02	4.37	14.41	10.00	S	40° 54' 14.0"	74° 34' 34.9"	631.23	633.26	632.96	30-Oct-00	8.54	13.50	624.42	619.46	4.96	624.10
MW-11I(R) <sup>(a)</sup>	Monitoring Well	North	147.83	East	195.43	RMT, INC.	February 20, 1998	52.00	2.00	STEEL	0.01	42.00	52.00	10.00	I	40° 54' 14.1"	74° 34' 34.9"	630.89	633.67	633.33	30-Oct-00	-	8.74	-	624.59	-	-
MW-11D(R) <sup>(a)</sup>	Monitoring Well	North	152.3	East	189.41	RMT, INC.	February 20, 1998	157.00	2.00	STEEL	0.01	147.00	157.00	10.00	D	40° 54' 14.2"	74° 34' 34.9"	630.66	633.35	633.09	30-Oct-00	-	6.51	-	626.58	-	-
MW-12S(R)	Monitoring Well	South	45.27	East	206.49	ROY F. WESTON	May 7, 1996	14.45	4.00	PVC	0.02	2.45	14.45	12.00	S	40° 54' 12.3"	74° 34' 35.9"	632.17	634.86	634.33	30-Oct-00	-	9.33	-	625.00	-	-
MW-13S	Monitoring Well	North	359.57	East	360.32	ROY F. WESTON	April to October 1989	16.39	4.00	STEEL	0.02	5.37	15.14	10.00	S	40° 54' 15.3"	74° 34' 31.7"	628.34	631.40	631.23	30-Oct-00	-	6.73	-	624.50	-	-
MW-13S(R)	Monitoring Well	North	338.93	East	365.76	ROY F. WESTON	January 27, 1995	17.00	2.00	PVC	0.01	2.00	12.00	10.00	S	40° 54' 15.0"	74° 34' 31.8"	628.26	630.96	630.59	30-Oct-00	-	6.23	-	624.36	-	-
MW-13I	Monitoring Well	North	340.76	East	358.82	ROY F. WESTON	July 31, 1989	46.30	2.00	STEEL	0.02	35.22	45.26	10.00	I	40° 54' 15.1"	74° 34' 31.9"	628.36	630.88	630.66	30-Oct-00	-	6.23	-	624.43	-	-
MW-14S	Monitoring Well	North	294.9	East	452.42	ROY F. WESTON	April to October 1989	15.46	4.00	STEEL	0.02	3.42	13.46	10.00	S	40° 54' 14.3"	74° 34' 31.0"	625.78	628.63	628.41	30-Oct-00	-	4.31	-	624.10	-	-
MW-14I <sup>(a)</sup>	Monitoring Well	North	284.3	East	441.91	ROY F. WESTON	April to October 1989	44.30	2.00	STEEL	0.02	33.22	43.26	10.00	I	40° 54' 14.2"	74° 34' 31.2"	625.93	628.32	628.23	30-Oct-00	-	3.92	-	624.31	-	-
MW-15S <sup>(a)</sup>	Monitoring Well	North	121.88	West	55.54	ROY F. WESTON	April to October 1989	25.94	4.00	STEEL	0.02	9.37	19.41	10.00	S	40° 54' 15.0"	74° 34' 38.0"	634.83	637.03	636.77	30-Oct-00	-	11.96	-	624.81	-	-
MW-15I <sup>(a)</sup>	Monitoring Well	North	125.48	West	46.56	ROY F. WESTON	July 17, 1989	43.92	2.00	STEEL	0.02	30.55	40.26	10.00	I	40° 54' 15.0"	74° 34' 37.9"	634.74	636.88	636.66	30-Oct-00	-	11.84	-	624.82	-	-
MW-16S	Monitoring Well	North	125.49	West	267.06	ROY F. WESTON	April to October 1989	23.90	4.00	STEEL	0.02	7.37	17.41	10.00	S	40° 54' 15.9"	74° 34' 40.4"	632.57	634.69	634.47	30-Oct-00	-	9.17	-	625.30		

**TABLE 6**  
**Water Level Elevations - 4th QUARTER 2000**  
**L.E. Carpenter, Wharton, New Jersey**

WELL LOCATION	WELL TYPE	BASELINE LOCATION		WELL INSTALLATION AND CONSTRUCTION INFORMATION <sup>(1)</sup>								GEODETIC LOCATION		ELEVATIONS (FT. MSL)			QUARTERLY MEASUREMENT INFORMATION <sup>(2)</sup>										
				MANAGING CONSULTANT	INSTALLATION DATE	TOTAL WELL DEPTH (FT)	WELL DIAMETER (IN)	SCREEN MATERIAL	SLOT SIZE (IN)	TOP OF SCREEN (FT)	BOTTOM OF SCREEN (FT)	SCREENED INTERVAL (FT)	AQUIFER SYSTEM	LATITUDE	LONGITUDE	GROUND	OUTER CASING	INNER WELL	MEAS. DATE	PRODUCT DEPTH	WATER ELEVATION	WATER ELEVATION	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ELEVATIONS <sup>(3)</sup>			
WP-A1	Area A Well Point	South	2.54	West	67.45	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 13.9"	74° 34' 38.8"	636.29	636.32	635.81	30-Oct-00	10.91	12.02	624.90	623.79	1.11	624.83		
WP-A2	Area A Well Point	North	17.62	West	91.63	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 14.2"	74° 34' 39.0"	637.31	639.62	639.19	30-Oct-00				BENT WELL CASING	NOT EVALUATED			
WP-A3	Area A Well Point	South	73.41	West	153.46	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 13.7"	74° 34' 40.3"	635.97	635.97	635.56	30-Oct-00				10.72	624.84	-		
WP-A4	Area A Well Point	North	18.63	West	45	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 14.0"	74° 34' 38.5"	635.63	635.66	635.10	30-Oct-00	12.05	13.39	623.05	621.71	1.34	622.96		
WP-A5	Area A Well Point	North	65.54	West	33.98	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 14.4"	74° 34' 38.1"	635.70	637.85		30-Oct-00	-	13.11	-	624.74	-	-		
WP-A6	Area A Well Point	South	6.64	East	4.69	ROY F. WESTON	1993	13.00	2.00	PVC	-	3.00	13.00	10.00	S	40° 54' 13.6"	74° 34' 38.0"	634.95		637.28	30-Oct-00	12.49	14.70	624.79	622.58	2.21	624.65
WP-A7	Area A Well Point	North	53.35	East	98.79	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 13.7"	74° 34' 36.6"	632.94	634.88		30-Oct-00	10.26			-	-	All Product
WP-A8	Area A Well Point	North	110.26	East	69.94	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 14.3"	74° 34' 36.6"	634.70	637.56		30-Oct-00	12.83	14.38	624.73	623.18	1.55	624.63		
WP-A9	Area A Well Point	North	13.71	East	46.84	ROY F. WESTON	1993	16.00	2.00	PVC	-	6.00	16.00	10.00	S	40° 54' 13.6"	74° 34' 37.4"	637.22	639.32		30-Oct-00	14.55	17.44	624.77	621.88	2.89	624.59
WP-B1	Area B Well Point	North	104.02	East	150.76	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 13.9"	74° 34' 35.7"	631.85	633.65		30-Oct-00	-	7.92	-	625.73	-	-
WP-B2	Area B Well Point	North	182.49	East	164.38	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 14.5"	74° 34' 35.1"	630.48	632.58		30-Oct-00	-	7.64	-	624.61	-	-
WP-B3	Area B Well Point	North	135.12	East	157.58	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 14.2"	74° 34' 35.4"	631.71	633.33		30-Oct-00	-	8.17	-	625.16	-	-
WP-B4	Area B Well Point	North	193.87	East	204.21	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 14.5"	74° 34' 34.5"	629.93	632.56		30-Oct-00	7.95	-	-	-	-	All Product		
WP-B5	Area B Well Point	North	224.46	East	216.97	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	40° 54' 14.7"	74° 34' 34.2"	630.03	632.11		30-Oct-00	-	6.58	-	625.53	-	-
WP-B6	Area B Well Point	North	130.98	East	310.48	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 13.4"	74° 34' 33.7"	629.72	631.86		30-Oct-00	-	7.19	-	624.67	-	-		
WP-B7	Area B Well Point	North	186.28	East	402.8	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 13.5"	74° 34' 32.3"	627.62	629.49		30-Oct-00	5.05	5.09	624.44	624.40	0.04	624.44		
WP-B10	Area B Well Point	North	228.07	East	174.18	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 14.9"	74° 34' 34.7"	630.42	633.12	632.74	30-Oct-00	-	8.14	-	624.60	-	-		
WP-C1	Area C Well Point	South	26.69	East	182.1	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 12.6"	74° 34' 36.1"	632.81	633.51		30-Oct-00	-	8.86	-	624.65	-	-		
WP-C2	Area C Well Point	South	20.92	East	219.91	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 12.5"	74° 34' 35.6"	633.02	634.46		30-Oct-00	-	8.84	-	625.62	-	-		
WP-C3	Area C Well Point	South	58.35	East	165.76	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 12.4"	74° 34' 36.4"	631.00	632.64		30-Oct-00	-	7.21	-	625.43	-	-		
WP-C4	Area C Well Point	South	2.11	East	183.73	ROY F. WESTON	1993	-	-	-	-	-	-	40° 54' 12.8"	74° 34' 35.9"	632.44	633.27		30-Oct-00	-		-	DRY	-	-		

FOOTNOTES

- (1) Elevation measured at the top of a 3.33 ft. Staff gauge. Water depth based on a visual observation of the water level on the Staff gauge.
- (2) Corrected water level elevations utilize an average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999  
© MW-1(R); EPR-11 & WP-A8)
- (3) Wells included in the quarterly sampling program. Depth to water recorded before purging
- (4) Wells installed during new RI efforts per NJDEP and EPA request to further delineate MW19/Hot Spot 1 Area
- (5) No boring log or well construction diagram available. Well specific information determined from Weston Geologic Cross Section
- (6) "—" in the Quarterly Measurement Information section of this database indicates that the presence of free product was NOT detected at any measurable thickness and therefore did not generate a product elevation, product thickness nor require water level elevation to be corrected
- (7) "—" in the Well Installation and Construction Information section indicates that well construction logs were not available for review

LEGEND

- S: Shallow Aquifer System
- I: Intermediate Aquifer System
- D: Deep Aquifer System
- R: Replacement Well
- NAS: Not Assessable
- REM: Removed

GENERAL NOTES

- All WP series wells finished elevation is 2 feet above nominal grade. Total depth of well only accounts for subsurface structure
- Wells MW-1A, MW3, MW-7, MW-10, MW-11I, MW-11D, MW-14D, MW-17D, MW-18D, MW-22, MW-24, MW-25, WP-88, Wp-D1, PZ-6A, PZ-2A(R), PZ-2AS, RW-1 have been abandoned
- Wells MW-11(R), MW11-D(R), MW-1(R), MW-2(R), MW-6(R), MW-22(R), and MW-25(R) are replacement wells

## **Appendix A**

## **Report Certification**

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**TWO-PART REPORT CERTIFICATION**  
**PURSUANT TO N.J.A.C. 7:26E**

JAN 2001

**N.J.A.C. 7:26C-1.2(b)**

"I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement, which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

**N.J.A.C. 7:26C-1.2(c):**

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement, which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Mr. Christopher R. Anderson

PRINTED NAME

Director, Environmental Services

TITLE

L.E. Carpenter & Company

COMPANY

Christopher Anderson

SIGNATURE

01/23/01

DATE

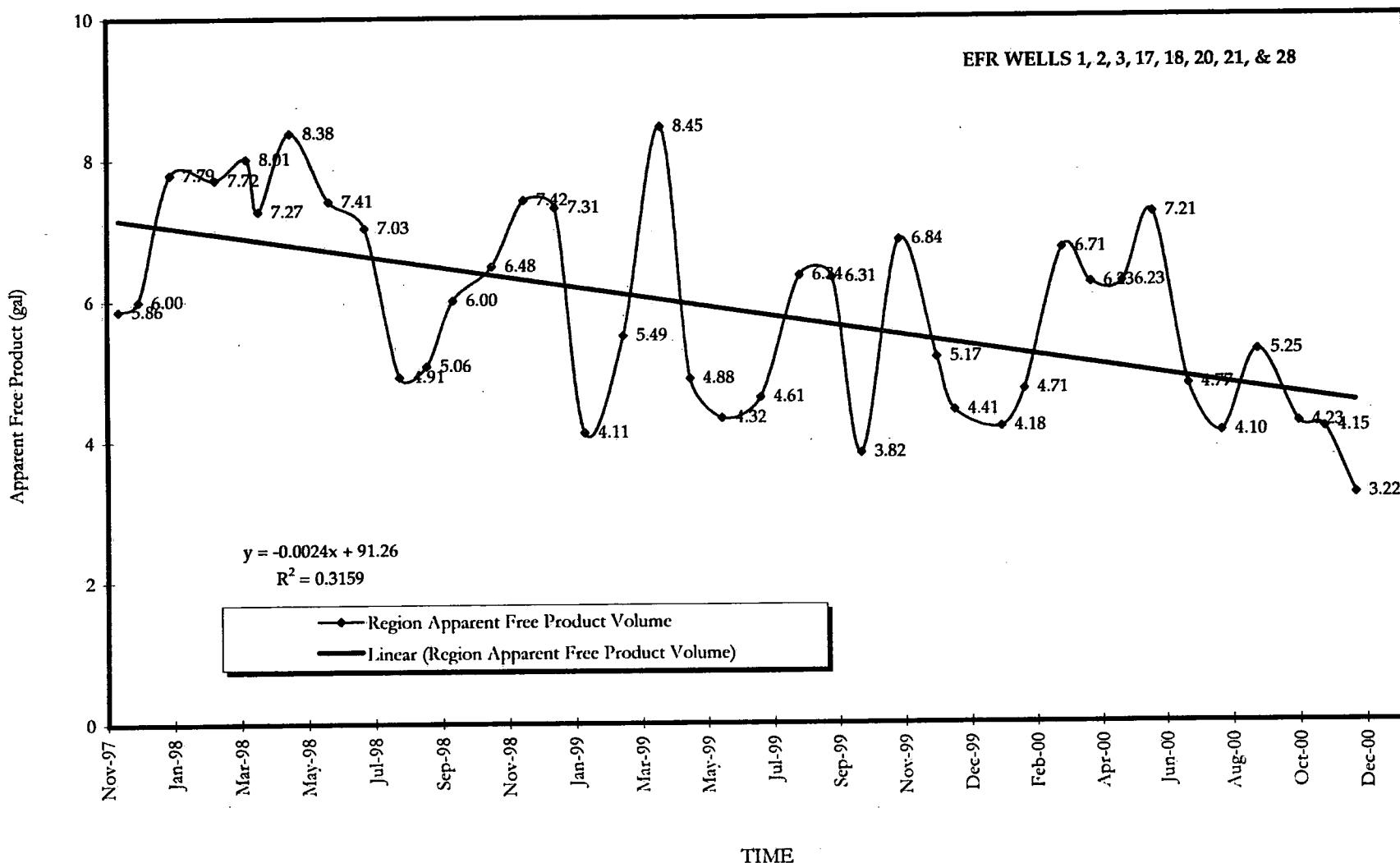
## **Appendix B**

# **Apparent Free Product Volume Trend Charts**

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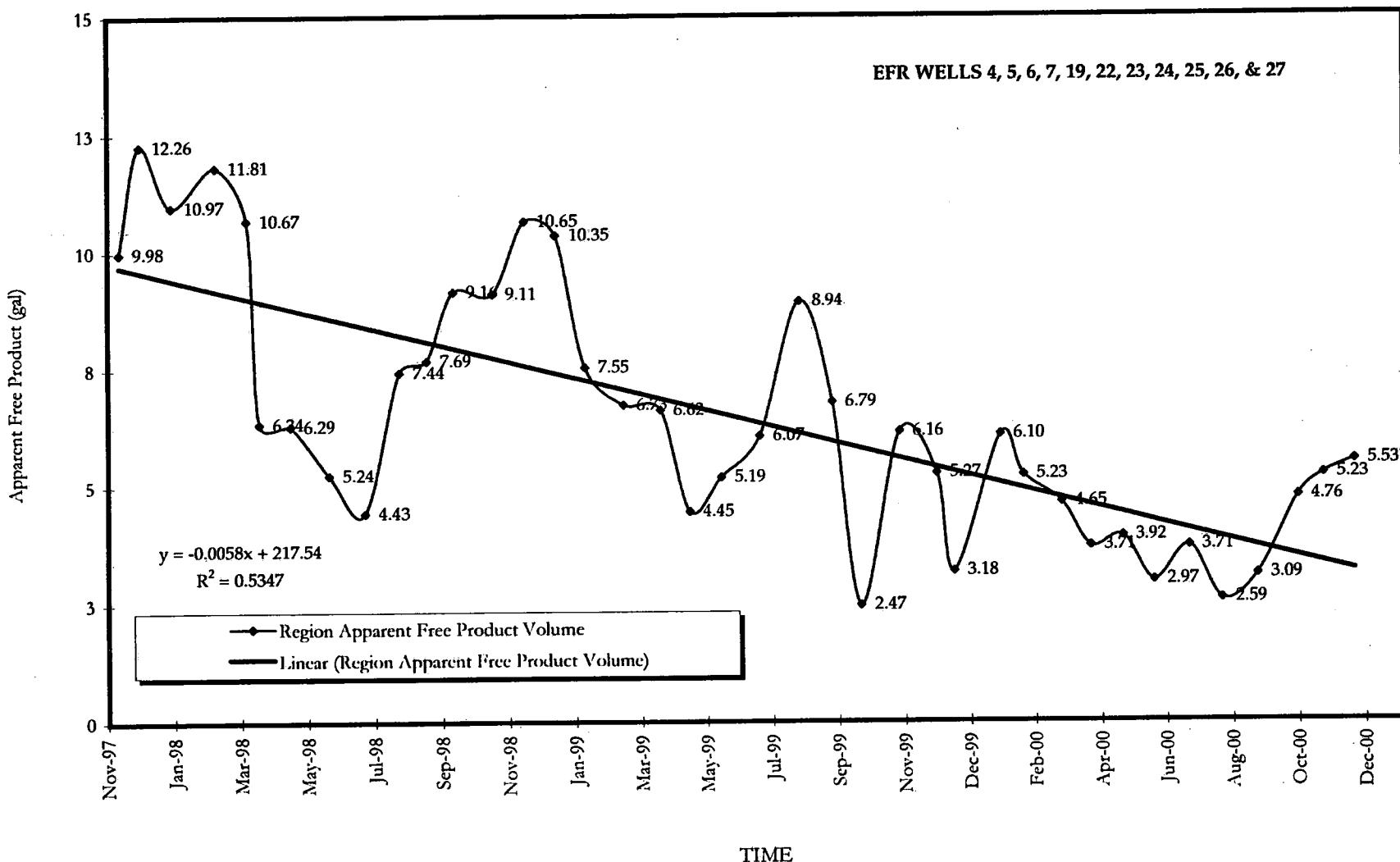
L.E. Carpenter and Company  
Western Region of Free Product

Apparent Free Product Volume vs. Time  
Through 4th Quarter 2000



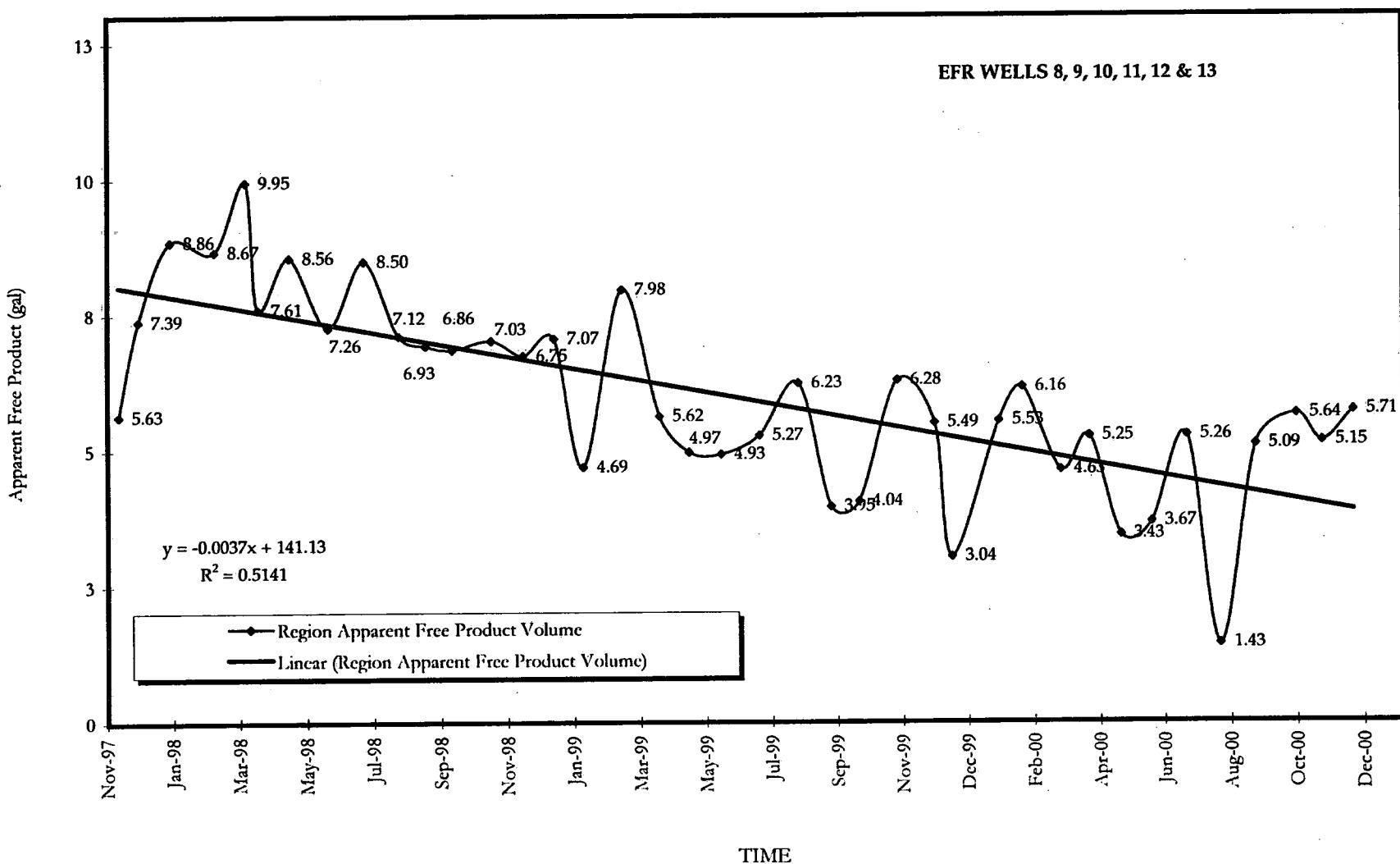
L.E. Carpenter and Company  
West-Central Region of Free Product

Apparent Free Product Volume vs. Time  
Through 4th Quarter 2000



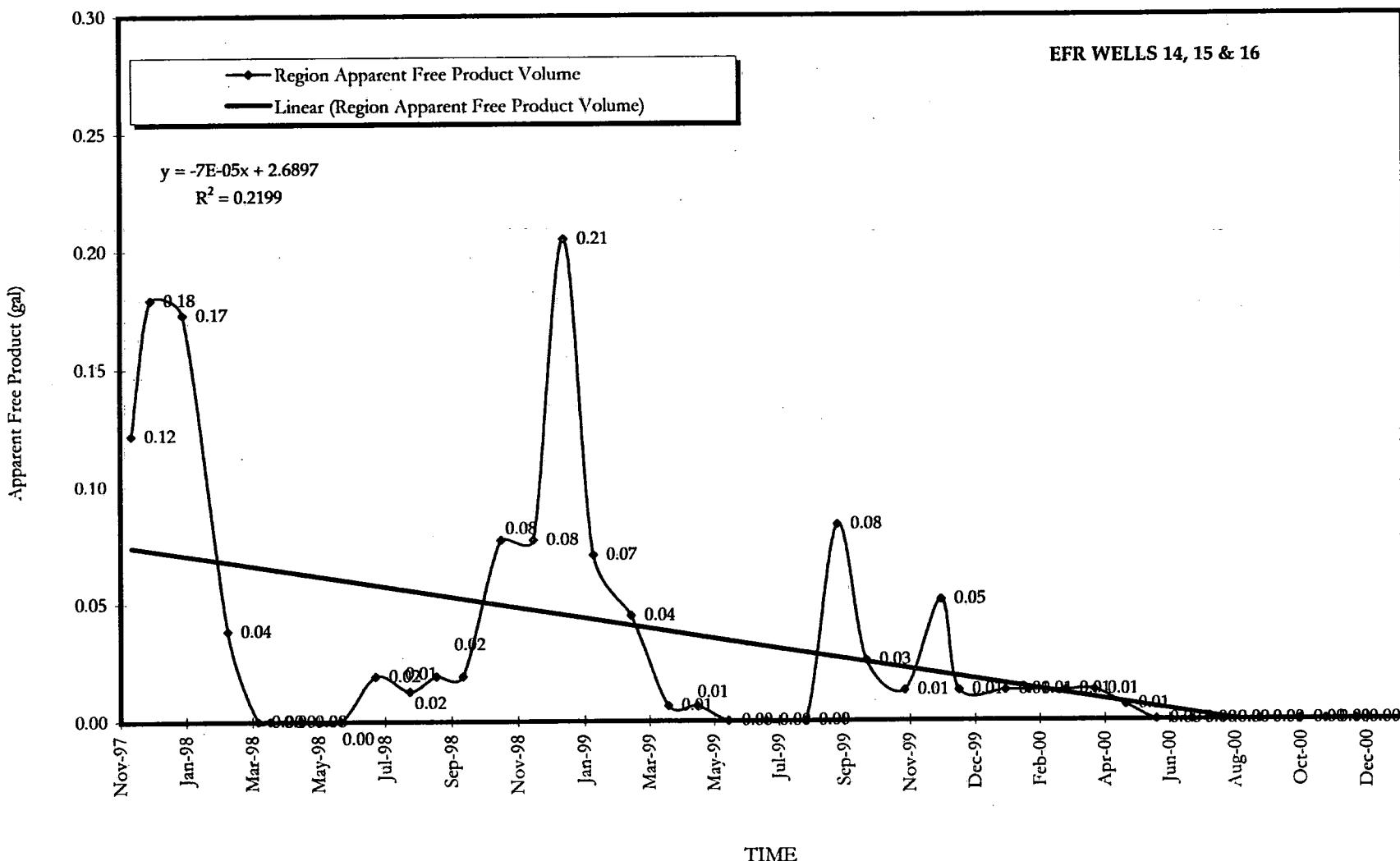
L.E. Carpenter and Company  
East-Central Region of Free Product

Apparent Free Product Volume vs. Time  
Through 4th Quarter 2000



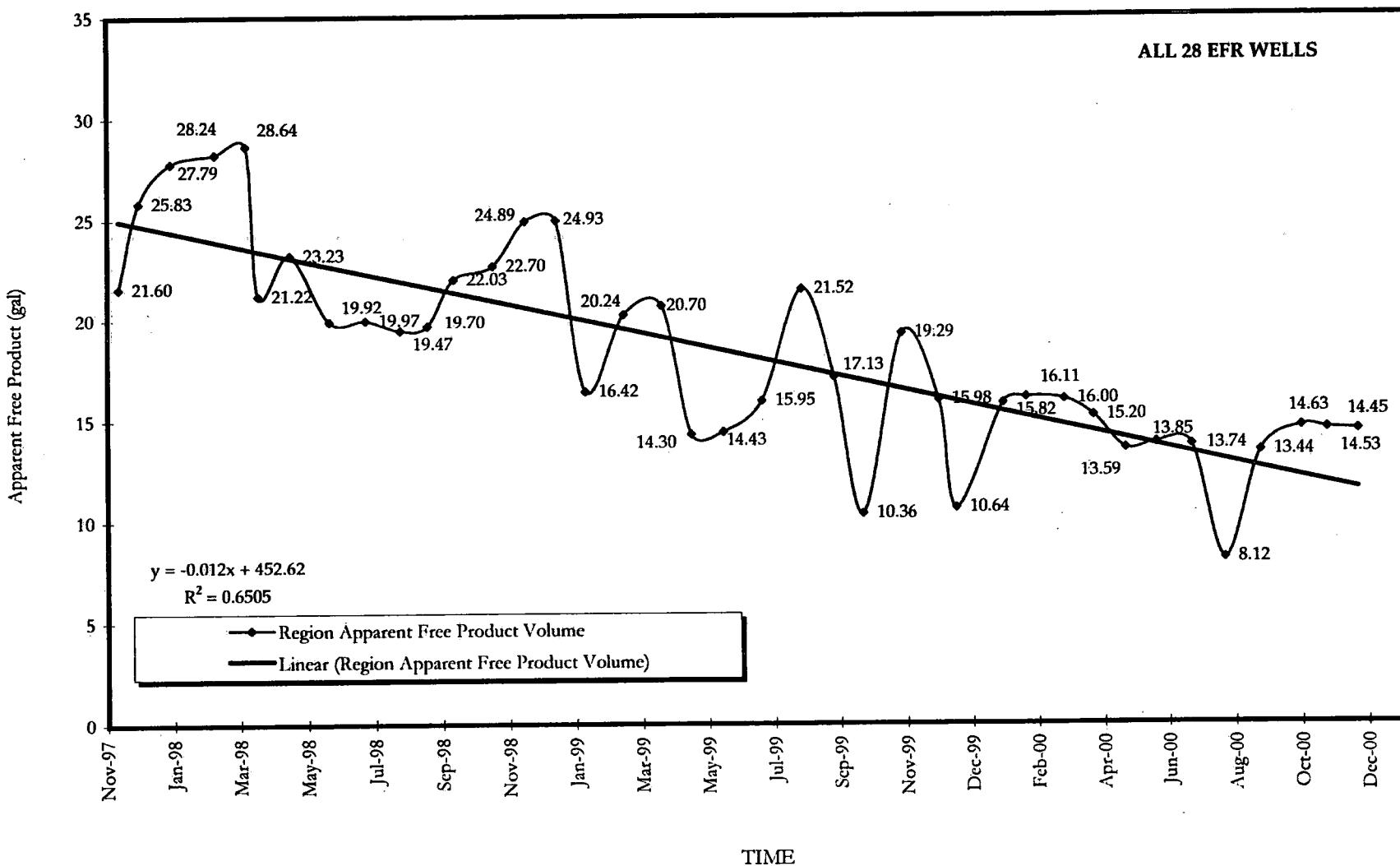
L.E. Carpenter and Company  
Eastern Region of Free Product

Apparent Free Product Volume vs. Time  
Through 4th Quarter 2000



L.E. Carpenter and Company  
Total Site Free Product

Apparent Free Product Volume vs. Time  
Through 4th Quarter 2000



## **Appendix C**

# **Monitoring Well Sampling Data**

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## Monitoring Well Data

Client: RMTProject: LE CarpenterJob No: F 165Date Sampled: 10/30/00Analyst: M. Morse

Well ID	MW 15S	MW 15I	MW 11D	MW 4	MW 17S	MW 22R	MW 25R	MW 14I	MW 21
Depth to Water From TOC feet (before purging)	11.96	11.84	6.51	7.89	9.94	3.93	3.09	3.92	4.73
Depth to Water From TOC feet (after purging)	11.99	11.88	6.66	8.33	10.02	8.06	7.25	4.23	4.78
Depth to Water From TOC feet (before sampling)	11.98	11.86	6.54	7.97	9.95	3.98	3.44	3.93	4.73
Depth to Bottom From TOC feet	19.48	40.14	161.25	18.31	15.00	8.81	9.11	43.32	14.68
PID Reading from Well Casing (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
pH before Purge	6.48	7.18	10.86	6.87	6.63	7.16	7.12	8.24	7.62
Temp. before Purge (°C)	14.6	12.6	13.3	13.4	13.5	12.4	12.1	12.5	11.9
Diss. Oxygen before Purge (ppm)	2.61	5.67	6.27	1.14	3.47	0.87	0.87	3.15	1.57
Cond. before Purge (umhos/cm)	475	414	652	508	382	528	484	391	468
Water Volume in Well (gal.)	4.9	4.5	24.8	1.7	3.3	0.8	1.0	6.3	6.5
Purge Method	peristaltic pump								
Purge Start Time	9:08	9:05	9:42	10:46	13:00	11:26	11:33	11:24	12:03
Purge End Time	9:28	9:21	11:05	10:53	13:12	11:30	11:37	11:41	12:23
Purge Rate (gpm)	0.7	0.8	0.9	0.9	0.8	0.9	0.9	1.1	1.0
Volume Purged (gal.)	15	14	75	6	10	3	3	19	20
pH after Purge	6.84	7.31	8.36	6.89	6.71	7.16	7.18	8.21	7.27
Temp. after Purge (°C)	15.1	12.8	12.3	13.3	14.3	13.1	12.4	12.7	12.6
Diss. Oxygen after Purge (ppm)	3.33	1.21	3.77	1.05	3.36	0.72	1.07	3.01	2.81
Cond. after Purge (umhos/cm)	370	684	290	453	381	515	498	347	580
pH at Sample	6.79	7.30	8.41	6.95	6.74	7.13	7.16	8.25	7.25
Temp. at Sample (°C)	15.3	13.1	12.4	13.5	14.2	12.6	12.1	12.4	12.6
Diss. Oxygen at Sample (ppm)	3.18	1.33	3.82	1.17	3.41	1.15	1.61	3.15	2.91
Cond. at Sample (umhos/cm)	384	681	288	438	385	461	426	348	584
Sampling Method	teflon bailer								
Time of Sampling	9:33	9:23	11:15	10:58	13:18	11:51	11:56	11:45	12:25

# **Appendix D**

## **MW-22R & MW-25R Groundwater Concentration Trend Analysis**

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**MW-22R**  
**BTEX and DEHP Concentration(s) Trend Analysis**

Sampling Date(s)	ANALYTE				
	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	DEHP (ug/L)
21-Feb-95	ND	57	ND	260	6500
13-Jun-95	ND	311	ND	955	380
13-Sep-95	ND	171	ND	693	NS
07-Dec-95	ND	123	ND	494	320
17-Sep-96	ND	359	ND	1320	NS
12-Dec-96	ND	320	ND	1330	ND
14-Aug-97	ND	5,730	ND	32,900	7,500
03-Oct-97	ND	11,400	348	66,000	NS
12-Mar-98	ND	4,070	348	20,600	NS
26-Aug-98	ND	2,260	ND	11,300	5,800
28-Aug-98	ND	1,880	ND	10,300	NS
18-Dec-98	ND	1,650	ND	7,230	1,100
21-Jan-99	ND	18	ND	84	NS
15-Apr-99	ND	1,600	ND	7,600	670
22-Jul-99	ND	1,200	ND	5,200	NS
25-Oct-99	ND	810	ND	3,300	1,200
17-Jan-00	ND	360	ND	1,400	NS
13-Apr-00	ND	820	ND	3,600	92
31-Jul-00	ND	1,000	ND	4,800	NS
30-Oct-00	ND	1,200	ND	6,200	5,100
<b>NJGWQS (ug/l)</b>	1	700	1000	40	30
<b>ROD Discharge Criteria (ug/l)</b>	1	350	500	20	30

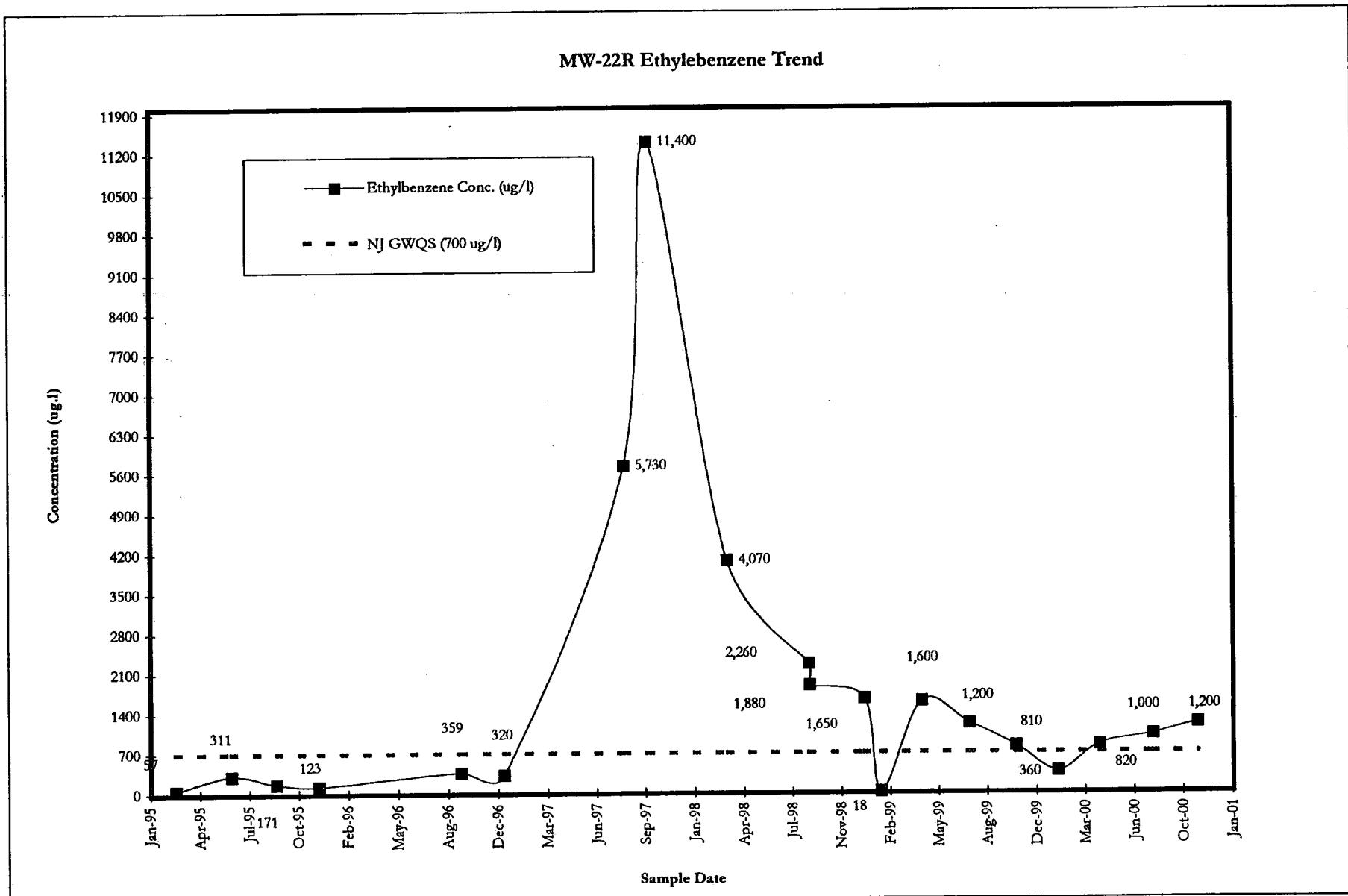
NOTES

Concentrations in bold exceed both the ROD discharge criteria and NJDEP GWQS

ND = Not detected above method detection limits

NS = Not Sampled

MW-22R  
CONTAMINANT OF CONCERN  
*Concentration vs. Time*

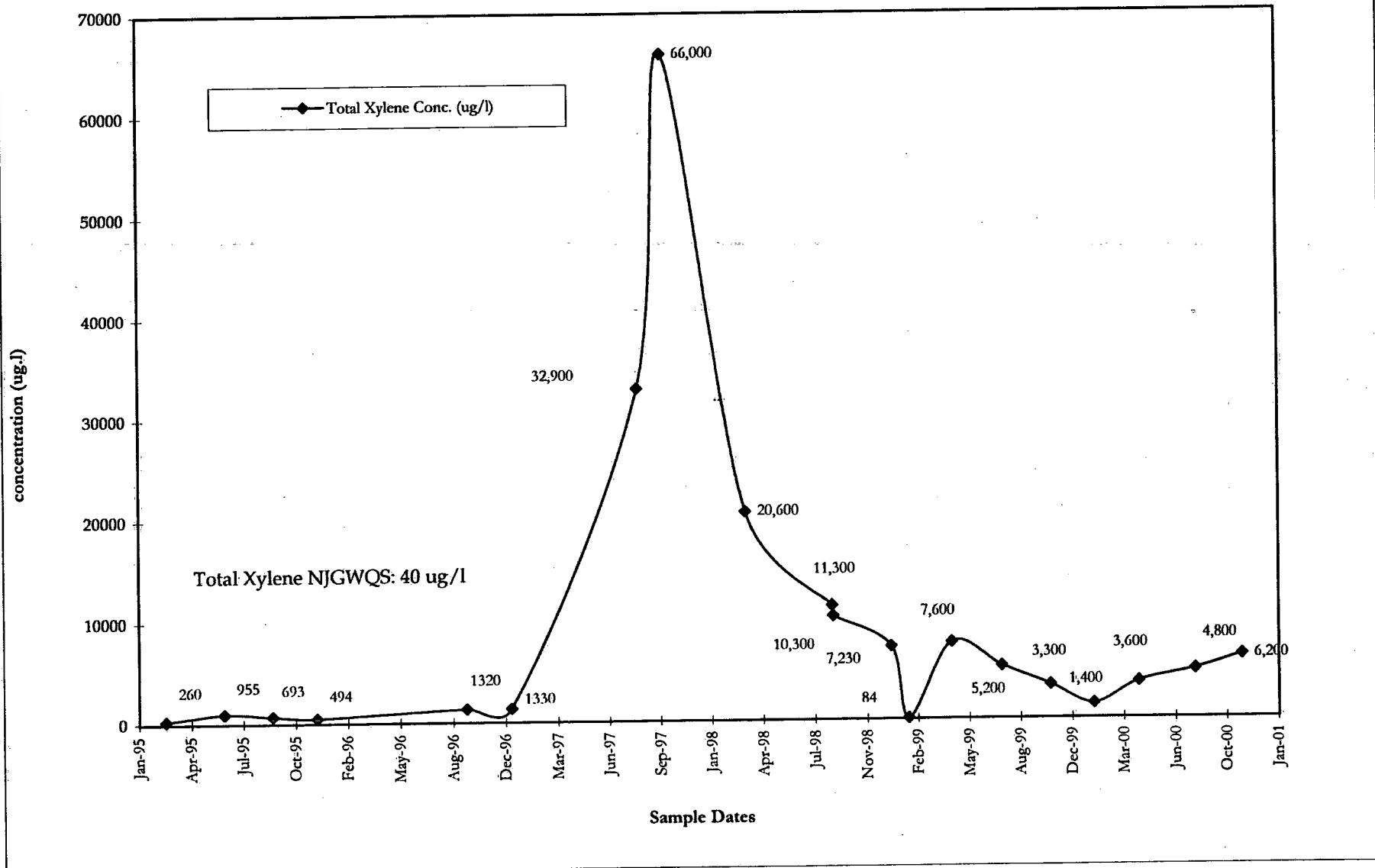


MW-22R

CONTAMINANTS OF CONCERN

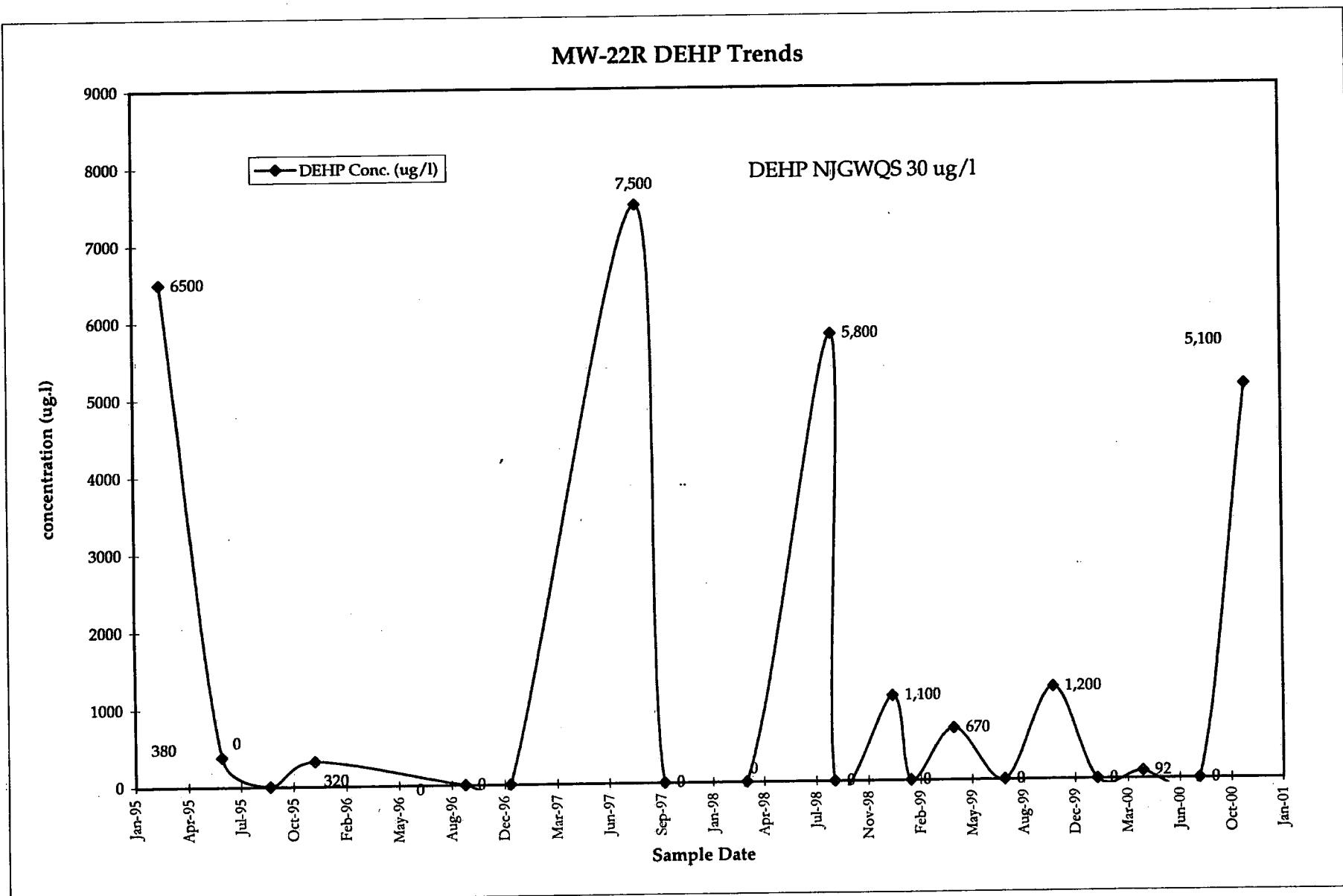
Concentration vs. Time

MW-22R Total Xylene Trend



MW-22R

Contaminants of Concern  
Concentration vs. Time



**MW-25R**  
**BTEX and DEHP Concentration(s) Trend Analysis**

Sampling Date(s)	ANALYTE				
	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	DEHP (ug/L)
01-Apr-95	ND	ND	ND	ND	1.6
01-Jul-95	ND	ND	ND	ND	NS
07-Dec-95	ND	ND	ND	ND	<b>68</b>
17-Sep-96	ND	0.34	ND	2.2	NS
12-Dec-96	ND	ND	ND	ND	ND
01-Jan-97	ND	ND	ND	ND	NS
01-Apr-97	ND	13.5	ND	89	<b>63</b>
01-Jul-97	ND	4.1	ND	30.7	NS
12-Mar-98	ND	0.33	ND	1.5	NS
01-Apr-98	ND	ND	ND	ND	5.3
28-Aug-98	ND	ND	ND	ND	NS
18-Dec-98	ND	ND	ND	ND	1.9
21-Jan-99	ND	ND	ND	ND	ND
15-Apr-99	ND	ND	ND	14	ND
22-Jul-99	ND	0.39	ND	1.4	9.6
25-Oct-99	ND	ND	ND	ND	ND
17-Jan-00	ND	ND	ND	ND	ND
13-Apr-00	ND	ND	ND	ND	ND
31-Jul-00	ND	ND	ND	ND	ND
30-Oct-00	ND	0.33	ND	1.1	3.4
<b>NJGWQS (ug/l)</b>	NA	700	1000	40	30
<b>ROD Discharge Criteria (ug/l)</b>	NA	350	500	20	30

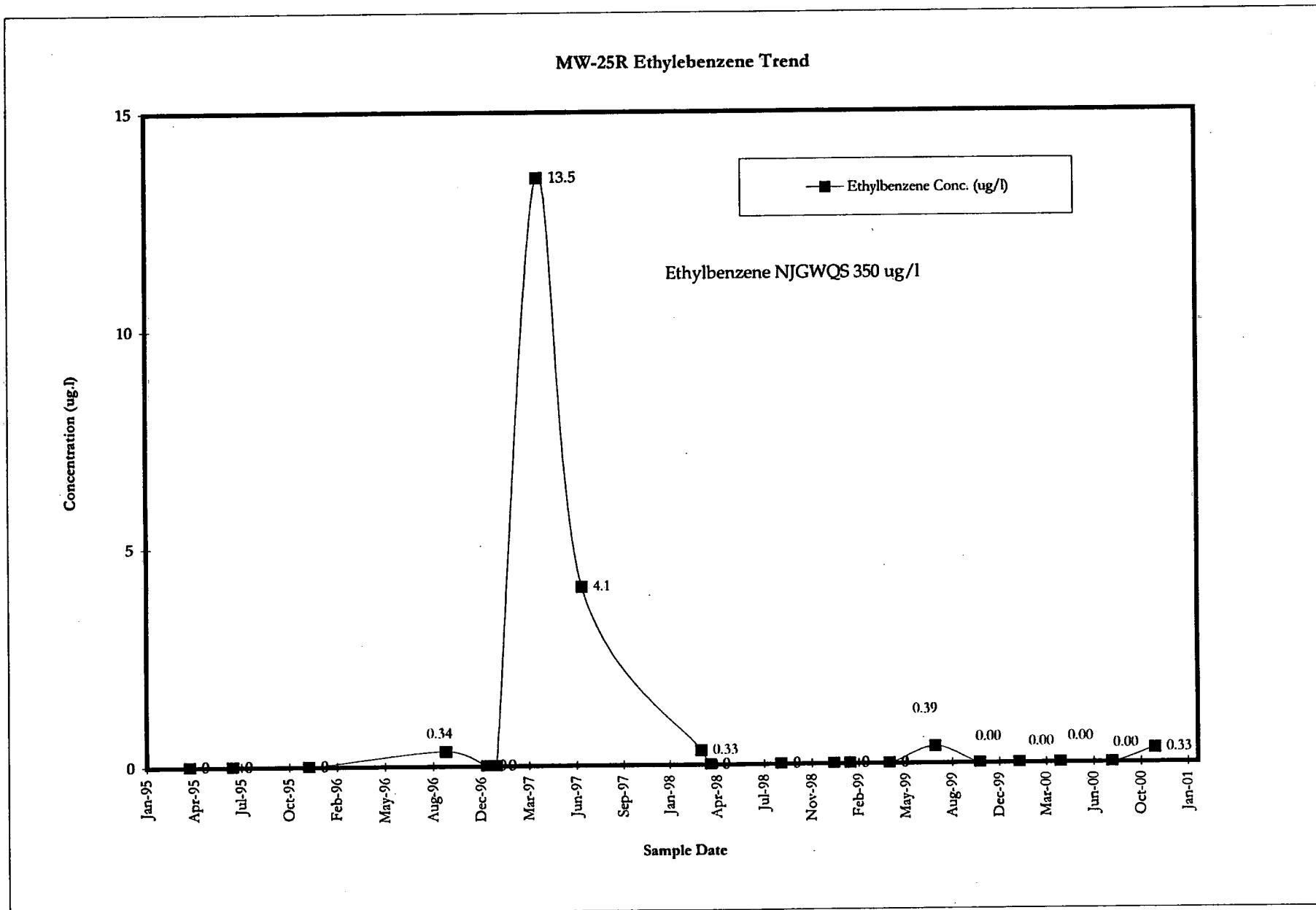
NOTES

Concentrations in bold exceed both the ROD discharge criteria and NJDEP GWQS

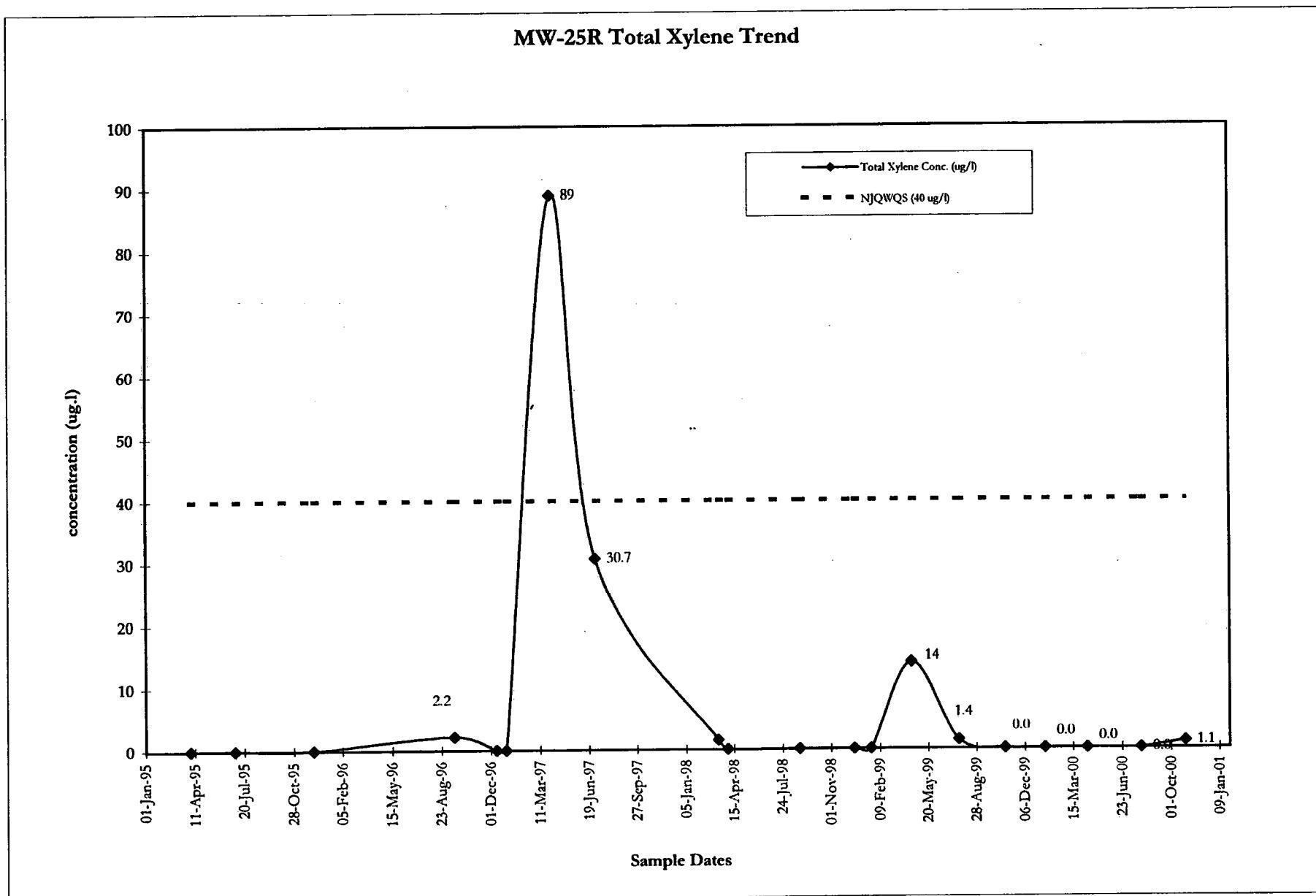
ND = Not detected above method detection limits

NS = Not Sampled

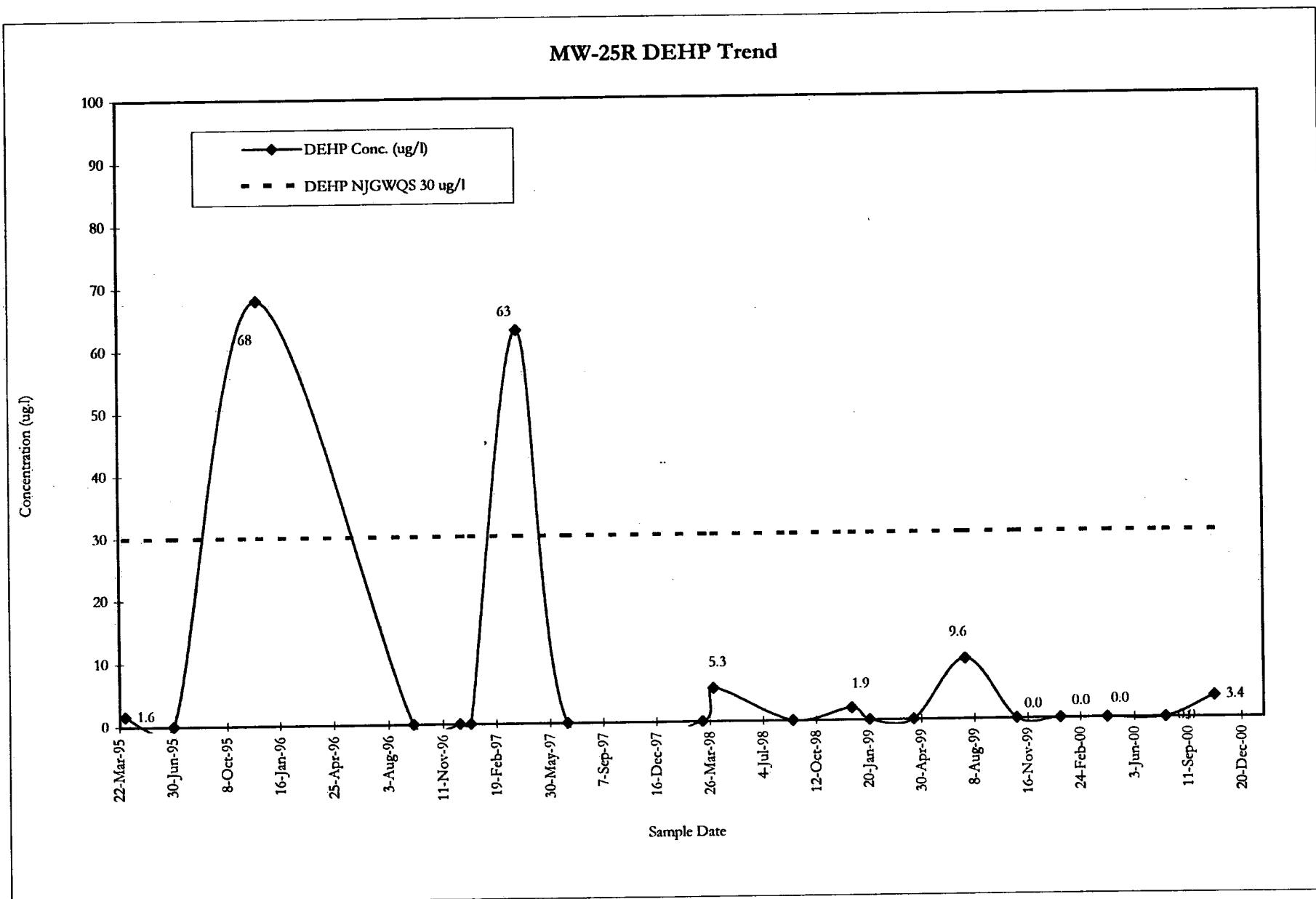
**MW-25R**  
**CONTAMINANT OF CONCERN**  
*Concentration vs. Time*



MW-25R  
CONTAMINANTS OF CONCERN  
*Concentration vs. Time*



MW-25R  
CONTAMINANT OF CONCERN  
*Concentration vs. Time*



**Appendix E**  
**Laboratory Report**  
**Severn Trent Services, STL Edison**

---

S E V E R N  
T R E N T  
S E R V I C E S

**STL Edison**  
777 New Durham Road  
Edison, NJ 08817  
Tel: 732-549-3900  
Fax: 732-549-3679  
[www.stl-inc.com](http://www.stl-inc.com)

November 16, 2000

Residuals Management Technologies, Inc.  
222 South Riverside Plaza  
Suite 280  
Chicago, IL 60606

Attention: Mr. Nick Clevett

Re: F165 - L.E. Carpenter

Dear Mr Clevett:

Enclosed are the results you requested for the following sample(s) received at our laboratory on October 30, 2000:

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Required</u>
238249	MW-15S	BTEX (GC) bis(2-Ethylhexyl)Phthalate
238250	MW-15I	BTEX (GC) bis(2-Ethylhexyl)Phthalate
238251	MW-11D	BTEX (GC) bis(2-Ethylhexyl)Phthalate
238252	MW-4	BTEX (GC) bis(2-Ethylhexyl)Phthalate
238253	MW-17S	BTEX (GC) bis(2-Ethylhexyl)Phthalate
238254	MW-22R	BTEX (GC) bis(2-Ethylhexyl)Phthalate

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Required</u>
238255	MW-25R	BTEX (GC) bis(2-Ethylhexyl)Phthalate
238256	MW-14I	BTEX (GC) bis(2-Ethylhexyl)Phthalate
238257	MW-21	BTEX (GC) bis(2-Ethylhexyl)Phthalate
238258	MW-4D	BTEX (GC)
238259	Field_Blank	BTEX (GC) bis(2-Ethylhexyl)Phthalate
238260	Trip_Blank	BTEX (GC)

An invoice for our services is also enclosed. If you have any questions please contact your Project Manager, Paul Simims, at (732) 549-3900.

Very truly yours,



Michael J. Urban  
Laboratory Manager

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Client ID: MW-15S  
Site: L.E. Carpenter

Lab Sample No: 238249  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5005.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

bis(2-Ethylhexyl)phthalate ND 2.0

Client ID: MW-15S  
Site: L.E. Carpenter

Lab Sample No: 238249  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9221.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Client ID: MW-15I  
Site: L.E. Carpenter

Lab Sample No: 238250  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5006.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**  
**METHOD 625**

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

bis(2-Ethylhexyl)phthalate

ND

2.0

Client ID: MW-15I  
Site: L.E. Carpenter

Lab Sample No: 238250  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9222.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Client ID: MW-11D  
Site: L.E. Carpenter

Lab Sample No: 238251  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5007.d

Matrix: WATER  
Level: LOW  
Sample Volume: 980 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

bis(2-Ethylhexyl)phthalate ND 2.0

Client ID: MW-11D  
Site: L.E. Carpenter

Lab Sample No: 238251  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9223.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 ml  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

Parameter

Benzene  
Toluene  
Ethylbenzene  
Xylene (Total)

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

ND	0.25
ND	0.27
ND	0.27
ND	0.25

Client ID: MW-4  
Site: L.E. Carpenter

Lab Sample No: 238252  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5008.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

bis(2-Ethylhexyl)phthalate            210            2.0

Client ID: MW-4  
Site: L.E. Carpenter

Lab Sample No: 238252  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9224.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

Parameter

<u>Analytical Result</u>	<u>Method Detection Limit</u>
<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND
Toluene	ND
Ethylbenzene	ND
Xylene (Total)	0.41

Client ID: MW-17S  
Site: L.E. Carpenter

Lab Sample No: 238253  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5009.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
bis(2-Ethylhexyl)phthalate	ND	2.0

Client ID: MW-17S  
Site: L.E. Carpenter

Lab Sample No: 238253  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9225.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

Parameter

	Analytical Result <u>Units: ug/l</u>	Method Detection Limit <u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Client ID: MW-22R  
Site: L.E. Carpenter

Lab Sample No: 238254  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5027.d

Matrix: WATER  
Level: LOW  
Sample Volume: 980 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 50.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

bis(2-Ethylhexyl)phthalate                    5100                    100

Client ID: MW-22R  
Site: L.E. Carpenter

Lab Sample No: 238254  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9226.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 ml  
Final Volume: 0.0 mL  
Dilution Factor: 250.0

**VOLATILE ORGANICS - GC/PID  
METHOD 602**

Parameter

Benzene  
Toluene  
Ethylbenzene  
Xylene (Total)

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

ND	62
ND	68
1200	68
6200	62

Client ID: MW-25R  
Site: L.E. Carpenter

Lab Sample No: 238255  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5026.d

Matrix: WATER  
Level: LOW  
Sample Volume: 980 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

bis(2-Ethylhexyl)phthalate                    3.4                    2.0

Client ID: MW-25R  
Site: L.E. Carpenter

Lab Sample No: 238255  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9229.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	0.33	0.27
Xylene (Total)	1.1	0.25

Client ID: MW-14I  
Site: L.E. Carpenter

Lab Sample No: 238256  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5012.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
bis(2-Ethylhexyl)phthalate	ND	2.0

Client ID: MW-14I  
Site: L.E. Carpenter

Lab Sample No: 238256  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9230.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID  
METHOD 602**

Analytical Result <u>Units: ug/l</u>	Method Detection Limit <u>Units: ug/l</u>
ND	0.25
ND	0.27
ND	0.27
ND	0.25

Client ID: MW-21  
Site: L.E. Carpenter

Lab Sample No: 238257  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5013.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

bis(2-Ethylhexyl)phthalate ND 2.0

Client ID: MW-21  
Site: L.E. Carpenter

Lab Sample No: 238257  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9231.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 ml  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Client ID: MW-4D  
Site: L.E. Carpenter

Lab Sample No: 238258  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9235.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

Parameter

	Analytical Result <u>Units: ug/l</u>	Method Detection Limit <u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	0.33	0.25

Client ID: Field\_Blank  
Site: L.E. Carpenter

Lab Sample No: 238259  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5014.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

bis(2-Ethylhexyl)phthalate ND 2.0

Client ID: **Field\_Blank**  
Site: L.E. Carpenter

Lab Sample No: 238259  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9236.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**  
**METHOD 602**

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

Client ID: Trip\_Blank  
Site: L.E. Carpenter

Lab Sample No: 238260  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9237.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

Parameter

	Analytical Result <u>Units: ug/l</u>	Method Detection Limit <u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25

## STL - Envirotech

777 New Durham Road  
 Edison, New Jersey 08817  
 Phone: (732) 549-3900 Fax: (732) 549-3679

## CHAIN OF CUSTODY / ANALYSIS REQUEST

PAGE 1 OF 2

Name ( for report and invoice) <i>Nick Cleveitt</i>	Samplers Name ( Printed) <i>M Morse / R Tagged.</i>			Site/Project Identification <i>LE Carpenter</i>		
Company <i>RMT Inc</i>	P.O. #			State (Location of site): NJ: <input type="checkbox"/> NY: <input type="checkbox"/> Other:		
Address <i>222 South Riverside Plaza Suite 520</i>				Regulatory Program:		
City <i>Chicago IL 60606</i>						
Phone	Fax	Analysis Turnaround Time	ANALYSIS REQUESTED (ENTER 'X' BELOW TO INDICATE REQUEST)			LAB USE ONLY
		Standard <input type="checkbox"/>	X	X	X	Project No: <i>801080</i>
		Rush Charges Authorized For:				Job No: <i>F165</i>
		2 Week <input type="checkbox"/>				
		1 Week <input type="checkbox"/>				
		Other <input type="checkbox"/>				
Sample Identification	Date	Time	Matrix	No. of Cont.		Sample Numbers
MW 15S	10/30/00	9:33	water	4	X X	238249
MW 15I		9:23		4	X X	238250
MW 11D		11:15			X X	238251
MW 4		10:58			X X	238252
MW 17S		13:18			X X	238253
MW 22R		11:51			X X	238254
MW 25R		11:56			X X	238255
MW 14I		11:45			X X	238256
MW 21		12:25		↓	X X	238257
MW 4D	↓	-	↓	3	X	238258
Preservation Used: 1 = ICE, 2 = HCl, 3 = H <sub>2</sub> SO <sub>4</sub> , 4 = HNO <sub>3</sub> , 5 = NaOH 6 = Other _____, 7 = Other _____			Soil:			
			Water:	2	1	

## Special Instructions

Water Metals Filtered (Yes/No)? \_\_\_\_\_

Relinquished by 1) <i>Mark Mine</i>	Company <i>STL</i>	Date / Time <i>10/30/00 14:15</i>	Received by 1) <i>J. McCloud</i>	Company <i>STL</i>
Relinquished by 2)	Company	Date / Time 	Received by 2)	Company
Relinquished by 3)	Company	Date / Time 	Received by 3)	Company
Relinquished by 4)	Company	Date / Time 	Received by 4)	Company

## STL - Envirotech

777 New Durham Road  
 Edison, New Jersey 08817  
 Phone: (732) 549-3900 Fax: (732) 549-3679

## CHAIN OF CUSTODY / ANALYSIS REQUEST

PAGE 2 OF 2

Name ( for report and invoice) <b>NICK Clevert</b>	Samplers Name ( Printed ) <b>M. Morse / R. Tuogood</b>			Site/Project Identification <b>LE Carpenter</b>	
Company <b>RMT Inc</b>	P.O. #			State (Location of site): NJ: <input checked="" type="checkbox"/> NY: <input type="checkbox"/> Other:	
Address <b>222 South Riverside Plaza Suite 830</b>	Analysis Turnaround Time			Regulatory Program:	
City <b>Chicago IL 60606</b>	Standard <input checked="" type="checkbox"/> Rush Charges Authorized For: 2 Week <input type="checkbox"/> 1 Week <input type="checkbox"/> Other <input type="checkbox"/>			ANALYSIS REQUESTED ( ENTER 'X' BELOW TO INDICATE REQUEST )	
Phone	Date	Time	Matrix	No. of. Cont.	Sample Numbers
Field Blank	10/31/00	11:00	Water	3 X	238259
Trip Blank	10/30/00	6:00	Water	2 X	238260
Preservation Used: 1 = ICE, 2 = HCl, 3 = H <sub>2</sub> SO <sub>4</sub> , 4 = HNO <sub>3</sub> , 5 = NaOH					
Soil: _____					
Water: <b>2</b> <b>1</b>					
6 = Other _____, 7 = Other _____					
Special Instructions					
Water Metals Filtered (Yes/No)?					
1) <i>J. Wilson</i>	Company <b>STL</b>	Date / Time <b>10/30/00 14:15</b>	Received by 1) <i>D. Paluck</i>	Company <b>STL</b>	
2)	Company	Date / Time 	Received by 2)	Company	
3)	Company	Date / Time 	Received by 3)	Company	
4)	Company	Date / Time 	Received by 4)	Company	

## Monitoring Well Data

Client: RMTProject: LE CarpenterJob No: F 165Date Sampled: 10/30/00Analyst: M. Morse

Well ID	MW 15S	MW 15I	MW 11D	MW 4	MW 17S	MW 22R	MW 25R	MW 14I	MW 21
Depth to Water From TOC feet (before purging)	11.96	11.84	6.51	7.89	9.94	3.93	3.09	3.92	4.73
Depth to Water From TOC feet (after purging)	11.99	11.88	6.66	8.33	10.02	8.06	7.25	4.23	4.78
Depth to Water From TOC feet (before sampling)	11.98	11.86	6.54	7.97	9.95	3.98	3.44	3.93	4.73
Depth to Bottom From TOC feet	19.48	40.14	161.25	18.31	15.00	8.81	9.11	43.32	14.68
PID Reading from Well Casing (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
pH before Purge	6.48	7.18	10.86	6.87	6.63	7.16	7.12	8.24	7.62
Temp. before Purge (°C)	14.6	12.6	13.3	13.4	13.5	12.4	12.1	12.5	11.9
Diss. Oxygen before Purge (ppm)	2.61	5.67	6.27	1.14	3.47	0.87	0.87	3.15	1.57
Cond. before Purge (umhos/cm)	475	414	652	508	382	528	484	391	468
Water Volume in Well (gal.)	4.9	4.5	24.8	1.7	3.3	0.8	1.0	6.3	6.5
Purge Method	peristaltic pump								
Purge Start Time	9:08	9:05	9:42	10:46	13:00	11:26	11:33	11:24	12:03
Purge End Time	9:28	9:21	11:05	10:53	13:12	11:30	11:37	11:41	12:23
Purge Rate (gpm)	0.7	0.8	0.9	0.9	0.8	0.9	0.9	1.1	1.0
Volume Purged (gal.)	15	14	75	6	10	3	3	19	20
pH after Purge	6.84	7.31	8.36	6.89	6.71	7.16	7.18	8.21	7.27
Temp. after Purge (°C)	15.1	12.8	12.3	13.3	14.3	13.1	12.4	12.7	12.6
Diss. Oxygen after Purge (ppm)	3.33	1.21	3.77	1.05	3.36	0.72	1.07	3.01	2.81
Cond. after Purge (umhos/cm)	370	684	290	453	381	515	498	347	580
pH at Sample	6.79	7.30	8.41	6.95	6.74	7.13	7.16	8.25	7.25
Temp. at Sample (°C)	15.3	13.1	12.4	13.5	14.2	12.6	12.1	12.4	12.6
Diss. Oxygen at Sample (ppm)	3.18	1.33	3.82	1.17	3.41	1.15	1.61	3.15	2.91
Cond. at Sample (umhos/cm)	384	681	288	438	385	461	426	348	584
Sampling Method	teflon bailer								
Time of Sampling	9:33	9:23	11:15	10:58	13:18	11:51	11:56	11:45	12:25

Water Levels / L.E. Carpenter Site Date: 10/30/00

Well ID	Depth to Product (ft)	Depth to Water (ft)
MW-1 (R)	10.66	11.88
MW-2 (R)		7.70
MW-3	7.87	8.37
MW-4		7.89
MW-6 (R)		7.57
MW-8		3.32
MW-9		5.09
MW-11S	8.54	13.50
MW-11IR		8.74
MW-11DR		6.51
MW-12R		9.33
MW-13S		6.73
MW-13(R)		6.23
MW-13I		6.23
MW-14S		4.31
MW-14I		3.92
MW-15S		11.96
MW-15I		11.84
MW-16S		9.17
MW-16I		9.64
MW-17S		7.89
MW-18S		6.24
MW-18I		6.05
MW-19		13.17
MW-19-1		13.14
MW-19-2		13.04
MW-19-3		13.85
MW-19-4		11.96
MW-19-5		13.11
MW-19-6		10.75
MW-19-7		9.98
MW-19-8		10.35
MW-20		11.29
MW-21		4.73

Well ID	Depth to Product (ft)	Depth to Water (ft)
MW-22 (R)		3.93
MW-23		new lock
MW-25 (R)		3.09
MW-26		8.63
RW-1	12.57	12.92
RW-2		7.26
RW-3		7.43
CW-1		8.41
CW-3		8.38
GEI-1I		5.72
GEI-2S		12.03
GEI-2I		12.18
GEI-3I		14.41
WP-A1	10.91	12.02
WP-A2	NA	NA
WP-A3		10.72
WP-A4	12.05	13.39
WP-A5		13.11
WP-A6	12.49	14.70
WP-A7	10.26	all product
WP-A8	12.83	14.38
WP-A9	14.55	17.44
WP-B1		7.92
WP-B2		7.64
WP-B3		8.17
WP-B4	7.95	all product
WP-B5		6.58
WP-B6		7.19
WP-B7	5.05	5.09
WP-B10		8.14
WP-C1		8.86
WP-C2		8.84
WP-C3		7.21
WP-C4		dry

Well ID	Depth to Product (ft)	Depth to Water (ft)
SG-D1		1.00
SG-D2		0.55
SG-D3		1.00
SG-R1		1.40
SG-R2		0.85
SG-R3		dry
EFR-1	*	*
EFR-2	*	*
EFR-3	*	*
EFR-4	*	*
EFR-5	*	*
EFR-6	*	*
EFR-7	*	*
EFR-8	*	*
EFR-9	*	*
EFR-10	*	*
EFR-11	*	*
EFR-12	*	*
EFR-13	*	*
EFR-14	*	*
EFR-15	*	*
EFR-16	*	*
EFR-17	*	*
EFR-18	*	*
EFR-19	*	*
EFR-20	*	*
EFR-21	*	*
EFR-22	*	*
EFR-23	*	*
EFR-24	*	*
EFR-25	*	*
EFR-26	*	*
EFR-27	*	*
EFR-28	*	*

\* Measurements Collected by RMT on later date

Monitoring Well Data

Client: RMT

Project: LE Carpenter

Date Sampled: 10/30/00

Job No.: F 165

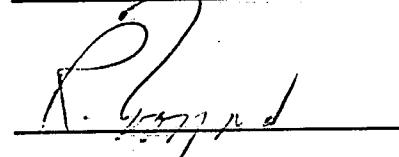
Name of Analyst: Matt Morse

Names & Signatures of

Samplers: Matt Morse



Rick Toogood



**INTERNAL CUSTODY RECORD  
AND  
LABORATORY CHRONICLE**  
**STL Edison**

777 New Durham Road, Edison, New Jersey  
08817

Job No: F165

Site: L.E. Carpenter

Client: Residuals Management Technologies, Inc.

BNAMS

WATER - 625

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
238249	10/30/2000	10/30/2000	11-4-00	NB	11-08-00	ET	5915
238250	10/30/2000	10/30/2000					
238251	10/30/2000	10/30/2000					
238252	10/30/2000	10/30/2000					
238253	10/30/2000	10/30/2000					
238254	10/30/2000	10/30/2000			11-09-00	WB	
238255	10/30/2000	10/30/2000				L	
238256	10/30/2000	10/30/2000			11-09-00	ET	
238257	10/30/2000	10/30/2000				L	
238259	10/30/2000	10/30/2000				L	

**INTERNAL CUSTODY RECORD  
AND  
LABORATORY CHRONICLE  
STL Edison**

**777 New Durham Road, Edison, New Jersey  
08817**

Job No: F165

**Site: L.E. Carpenter**

**Client:** Residuals Management Technologies, Inc.

VOAGC

602

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
<b>WATER</b>							
238249	10/30/2000	10/30/2000			11/1/w	SP	7111
238250	10/30/2000	10/30/2000					
238251	10/30/2000	10/30/2000					
238252	10/30/2000	10/30/2000					
238253	10/30/2000	10/30/2000					
238254	10/30/2000	10/30/2000					
238255	10/30/2000	10/30/2000			11/2/w		
238256	10/30/2000	10/30/2000					
238257	10/30/2000	10/30/2000					
238258	10/30/2000	10/30/2000					
238259	10/30/2000	10/30/2000					7109
238260	10/30/2000	10/30/2000					1

## Analytical Methodology Summary

### Volatile Organics:

Unless otherwise specified, water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Drinking water samples are analyzed by EPA Method 524.2. Solid samples are analyzed for volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8260B. Water samples are analyzed for volatile organics by purge and trap GC/PID and GC/ELCD as specified in EPA Methods 601 and 602. Solid samples are analyzed by GC/PID and GC/ELCD in accordance with SW-846, 3rd Edition Method 8021B.

### Acid and Base/Neutral Extractable Organics:

Unless otherwise specified, water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270C.

### GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8260B and 8270C. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatile, 15 for base/ neutrals and 10 for acid extractables).

### Organochlorine Pesticides and PCBs:

Unless otherwise specified, water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8081A for organochlorine pesticides and Method 8082 for PCBs.

### Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Appendix A, page 52, and analyzed by U.S. EPA Method 418.1

**Metals Analysis:**

Metals analyses are performed by any of four techniques specified by a Method Code provided on each data report page, as follows:

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)

A - Flame Atomic Absorption

F - Furnace Atomic Absorption

CV - Manual Cold Vapor (Mercury)

Water samples are digested and analyzed using EPA methods provided in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition); samples are digested according to Method 3050B "Acid Digestion of Soil, Sediments and Sludges."

Specific method references for ICP analyses are water Method 200.7 and solid Method 6010B. Mercury analyses are conducted by the manual cold vapor technique specified by water Method 245.1 and solid Method 7471A. Other specific Atomic Absorption method references are as follows:

<u>Element</u>	Water Test Method		Solid Test Method	
	<u>Flame</u>	<u>Furnace</u>	<u>Flame</u>	<u>Furnace</u>
Aluminum	202.1	202.2	7020	--
Antimony	204.1	204.2	7040	7041
Arsenic	--	206.2	--	7060
Barium	208.1	--	7080	--
Beryllium	210.1	210.2	7090	7091
Cadmium	213.1	213.2	7130	7131
Calcium	215.1	--	7140	--
Chromium, Total	218.1	218.2	7190	7191
Chromium, (+6)	218.4	218.5	7197	7195
Cobalt	219.1	219.2	7200	7201
Copper	220.1	220.2	7210	--
Iron	236.1	236.2	7380	--
Lead	239.1	239.2	7420	7421
Magnesium	242.1	--	7450	--
Manganese	243.1	243.2	7460	--
Nickel	249.1	249.2	7520	--
Potassium	258.1	--	7610	--
Selenium	--	270.2	--	7740
Silver	272.1	272.2	7760	--
Sodium	273.1	--	7770	--
Tin	283.1	283.2	7870	--
Thallium	279.1	279.2	7840	7841
Vanadium	286.1	286.2	7910	7911
Zinc	289.1	289.2	7950	--

**Cyanide:**

Water samples are analyzed for cyanide using EPA Method 335.3. Cyanide is determined in solid samples as specified in the EPA Contract Laboratory Program IFB dated July 1988, revised February 1989.

Phenols:

Water samples are analyzed for total phenols using EPA Method 420.2. Total phenols are determined in solid samples by preparing the sample as outlined in the EPA Contract Laboratory Program IFB for cyanide, followed by a phenols determination using EPA Method 420.1.

Cleanup of Semivolatile Extracts:

Upon request Method 3611B Alumina Column Cleanup and/or Method 3650B Acid-Base Partition Cleanup are performed to improve detection limits by the removal of saturated hydrocarbon interferences.

Hazardous Waste Characteristics:

Samples for hazardous waste characteristics are analyzed as specified in the U.S. EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

Ignitability - Method 1020A

Corrosivity - Water pH Method 9040B  
Soil pH Method 9045C

Reactivity - Chapter 7, Section 7.3.3 and 7.3.4  
respectively for hydrogen cyanide and  
hydrogen sulfide release

Toxicity - TCLP Method 1311

Miscellaneous Parameters:

Additional analyses performed on both aqueous and solid samples are in accordance with methods published in the following references:

- Test Methods for Evaluating Solid Wastes, SW-846 3rd Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, 17th Edition.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979.

## DATA REPORTING QUALIFIERS

ND - The compound was not detected at the indicated concentration.

J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.

\* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

NON-CONFORMANCE SUMMARY

STL Envirotech Job Number: F145

Volatile Organics Analysis:

All data conforms with method requirements ; or  
Analysis was not requested ; or  
Non-conformance for the specific samples listed is as follows:

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See continuation page if checked ( )

Base/Neutral and/or Acid Extractable Organics:

All data conforms with method requirements ; or  
Analysis was not requested ; or  
Non-conformance for the specific samples listed is as follows:

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See continuation page if checked ( )

PCBs and/or Organochlorine Pesticides:

All data conforms with method requirements ; or  
Analysis was not requested , or  
Non-conformance for the specific samples listed is as follows:

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See continuation page if checked ( )

Page 1 of 2

Non-conformance Summary, Page 2 of 2  
STL Edison Job Number: F105

Metals Analysis:

All data conforms with method requirements \_\_\_\_\_; or  
Analysis was not requested ✓; or  
Non-conformance for the specific samples listed is as follows:

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See continuation page if checked ( )

Total Petroleum Hydrocarbons Analysis:

All data conforms with method requirements \_\_\_\_\_; or  
Analysis was not requested ✓; or  
Non-conformance for the specific samples listed is as follows:

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See continuation page if checked ( )

General Chemistry/Disposal Analysis:

All data conforms with method requirements \_\_\_\_\_; or  
Analysis was not requested ✓; or  
Non-conformance for the specific samples listed is as follows:

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See continuation page if checked ( )

Signature of

Laboratory Manager:



Date: 11-16-00

Client ID: MW-15S  
Site: L.E. Carpenter

Lab Sample No: 238249  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5005.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection Limit</u> <u>Units: ug/l</u>
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5005.d  
Report Date: 09-Nov-2000 09:25

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5005.d  
Lab Smp Id: 238249 Client Smp ID: MW-15S  
Inj Date : 08-NOV-2000 18:33  
Operator : BNAMS 3 Inst ID: BNAMS3.i  
Smp Info : 238249;990;2;1  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/08nov00.b/BNA625b.m  
Meth Date : 08-Nov-2000 09:11 emmylou Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 13  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Processing Host: hpdl

Compound Sublist: Bis2phb.sub

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	990.00000	Volume of sample extracted (mL)

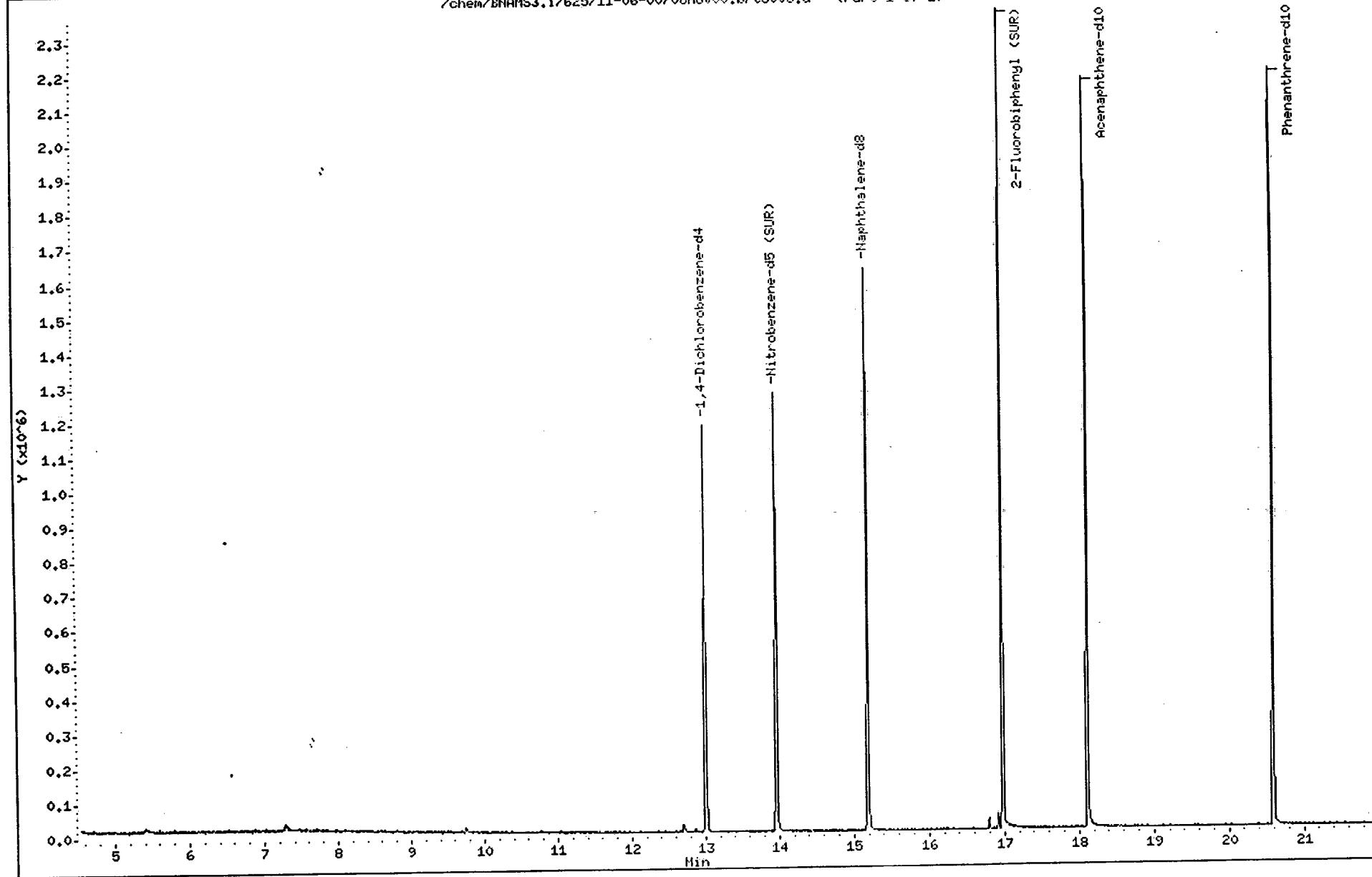
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)	FINAL ( ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.005	13.119	(1.000)	226064	40.0000		
\$ 75 Nitrobenzene-d5 (SUR)	82	13.954	13.990	(0.919)	633425	53.0372	110	
* 80 Naphthalene-d8	136	15.193	15.212	(1.000)	936289	40.0000		
\$ 77 2-Fluorobiphenyl (SUR)	172	16.980	17.003	(0.937)	959906	44.3506	90	
* 82 Acenaphthene-d10	164	18.124	18.142	(1.000)	654000	40.0000		
* 83 Phenanthrene-d10	188	20.593	20.613	(1.000)	1123590	40.0000		
\$ 78 Terphenyl-d14 (SUR)	244	23.207	23.221	(0.928)	722337	46.8926	95	
* 81 Chrysene-d12	240	25.001	25.036	(1.000)	751533	40.0000		
* 84 Perylene-d12	264	28.504	28.547	(1.000)	731443	40.0000		

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5005.d  
Date : 08-NOV-2000 18:33  
Client ID: MW-15S  
Sample Info: 238249;990;2;1  
Purge Volume: 990.0  
Column phase: DB-5

Instrument: BNAMS3.i  
Operator: BNAMS 3  
Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5005.d (Part 1 of 2)

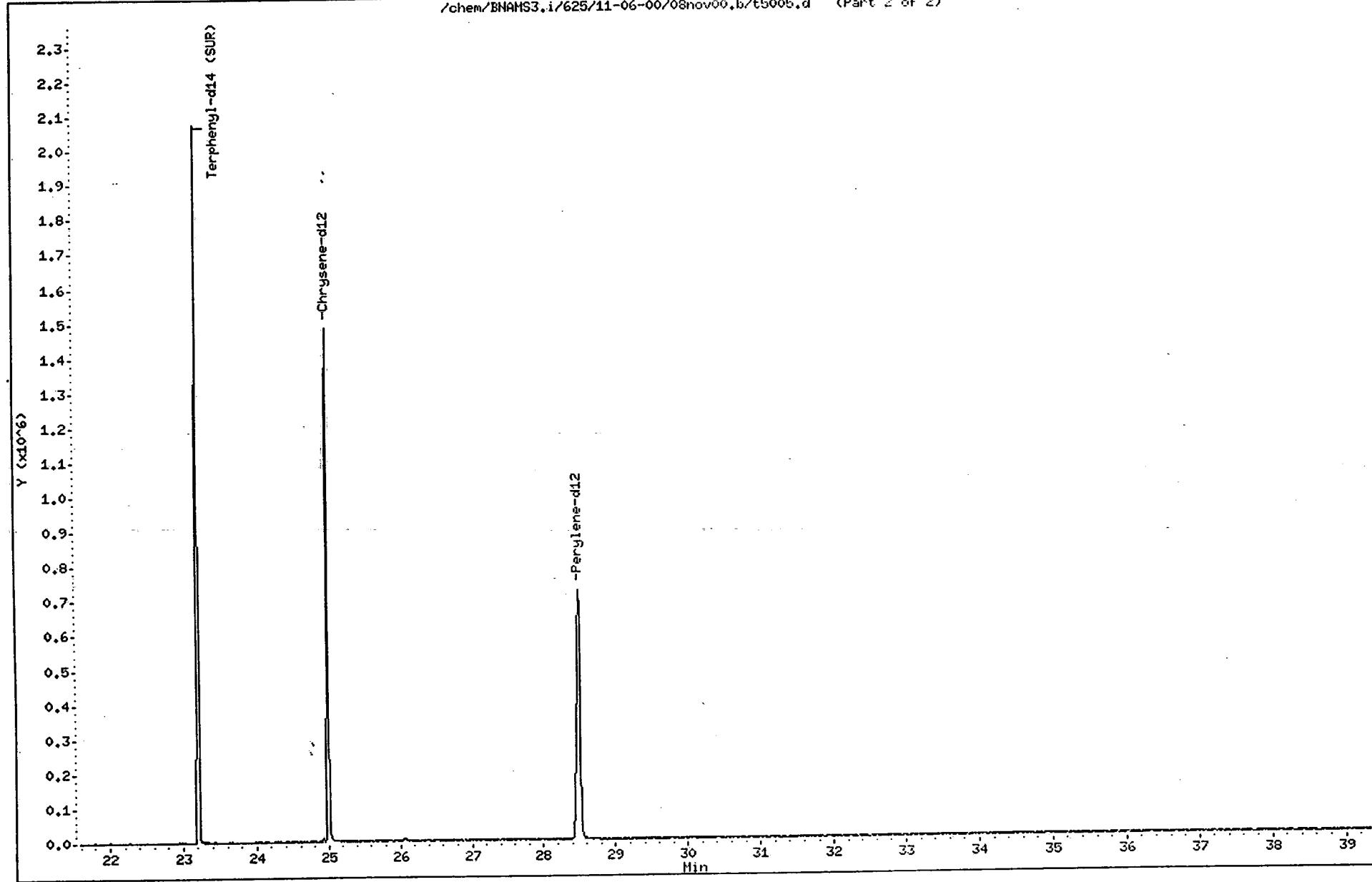


Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5005.d  
Date : 08-NOV-2000 18:33  
Client ID: MW-15S  
Sample Info: 238249;990;2;1  
Purge Volume: 990.0  
Column phase: DB-5

Instrument: BNAMS3.i  
Operator: BNAMS 3  
Column diameter: 0.53

39

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5005.d (Part 2 of 2)



Client ID: MW-15I  
Site: L.E. Carpenter

Lab Sample No: 238250  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5006.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection</u> <u>Limit</u> <u>Units: ug/l</u>
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5006.d  
Report Date: 09-Nov-2000 09:26

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5006.d  
Lab Smp Id: 238250 Client Smp ID: MW-15I  
Inj Date : 08-NOV-2000 19:21 Inst ID: BNAMS3.i  
Operator : BNAMS 3  
Smp Info : 238250,990;2;1  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/08nov00.b/BNA625b.m  
Meth Date : 08-Nov-2000 09:11 emmylou Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 14  
Dil Factor: 1.00000 ✓  
Integrator: HP RTE Compound Sublist: Bis2phb.sub  
Target Version: 3.50  
Processing Host: hpdl

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	990.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/ml)	(ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.005	13.019	1.000	220473	40.0000		
\$ 76 Nitrobenzene-d5 (SUR)	82	13.971	13.990	0.983	689050	53.1108	110	
* 80 Naphthalene-d3	136	15.193	15.212	1.000	836659	40.0000		
\$ 77 2-Fluorobiphenyl (SUR)	172	16.986	17.003	0.997	985039	47.0554	95	
* 82 Acenaphthene-d10	164	18.123	18.142	(1.000)	632533	40.0000		
* 83 Phenanthrene-d10	188	20.593	20.613	(1.000)	1112293	40.0000		
\$ 78 Terphenyl-d14 (SUR)	244	23.207	23.221	(0.928)	707282	47.6811	96	
* 81 Chrysene-d12	240	25.001	25.036	(1.000)	723700	40.0000		
* 84 Perylene-d12	264	28.504	28.547	(1.000)	718445	40.0000		

Data File: /chem/BNAHS3.i/625/11-06-00/08nov00.b/t5006.d

Date : 08-NOV-2000 19:21

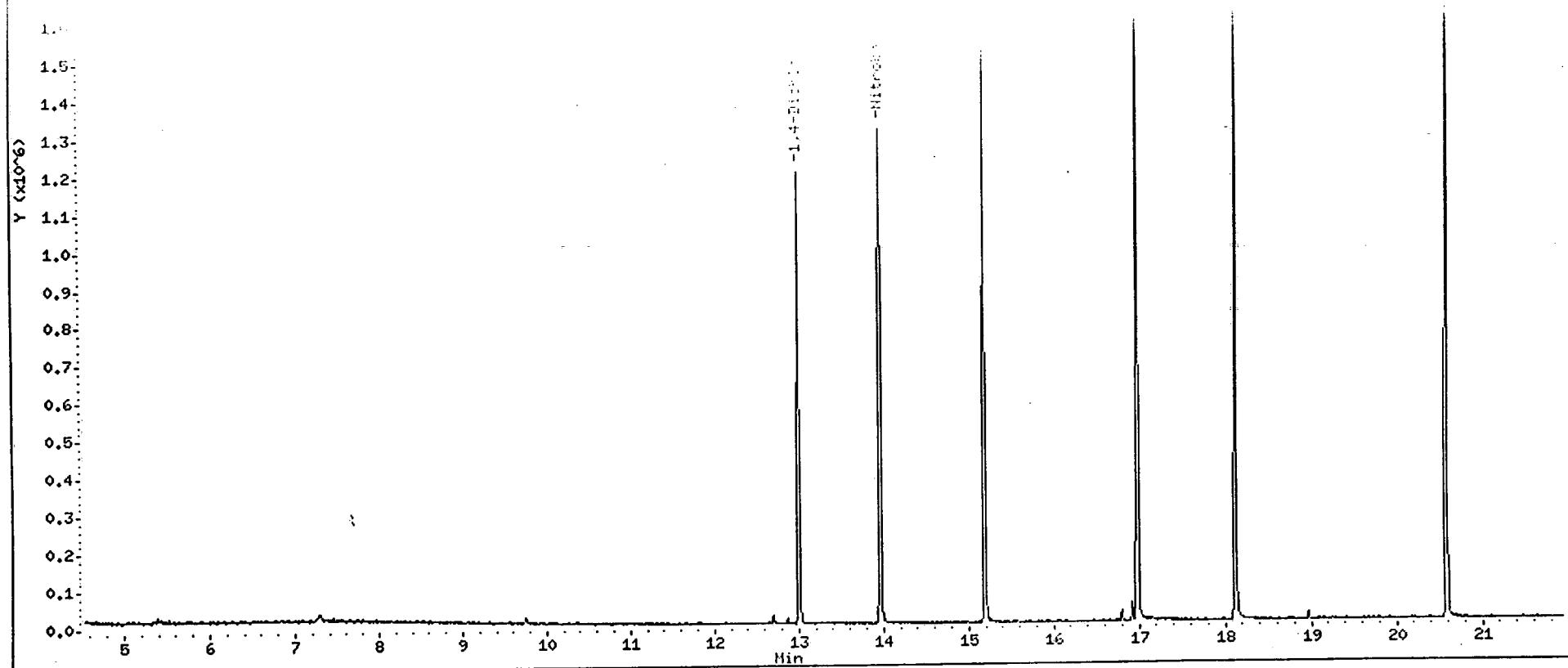
Client ID: MM-15I

Sample Info: 238250;090;2;1

Purge Volume: 990.0

Instrument: 5840A

Column: DB-



Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5006.d

Date : 08-NOV-2000 19:21

Client ID: MW-15I

Sample Info: 238250;990;2;1

Purge Volume: 990.0

Column phase: DB-5

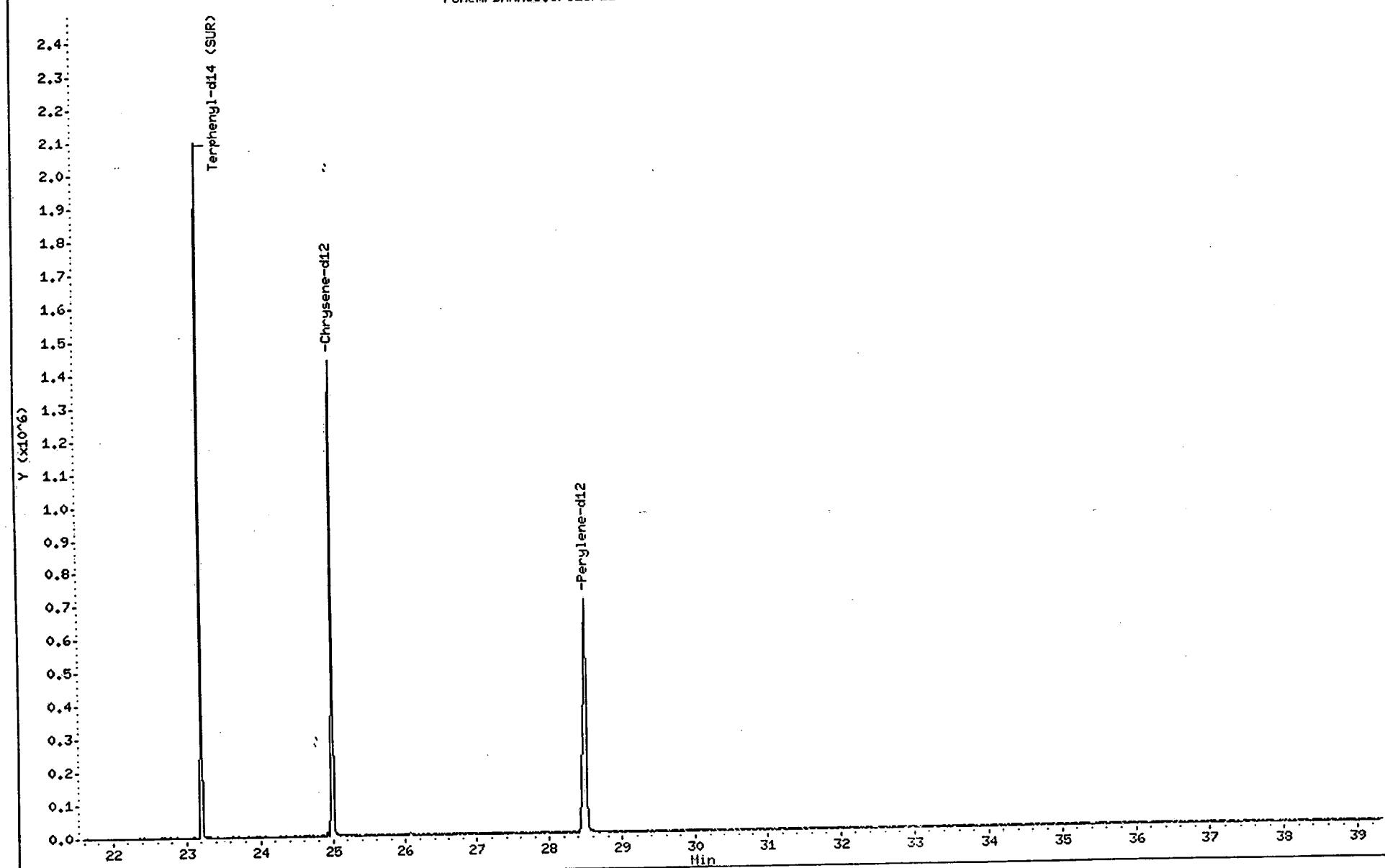
Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

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/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5006.d (Part 2 of 2)



Client ID: MW-11D  
Site: L.E. Carpenter

Lab Sample No: 238251  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5007.d

Matrix: WATER  
Level: LOW  
Sample Volume: 980 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u> <u>Units:</u> ug/l	<u>Method Detection</u> <u>Limit</u> <u>Units:</u> ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5007.d  
Report Date: 09-Nov-2000 09:26

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5007.d  
Lab Smp Id: 238251 Client Smp ID: MW-11D  
Inj Date : 08-NOV-2000 20:09  
Operator : BNAMS 3 Inst ID: BNAMS3.i  
Smp Info : 238251;980;2;1  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/08nov00.b/BNA625b.m  
Meth Date : 08-Nov-2000 09:11 emmylou Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 15  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: Bis2phb.sub  
Target Version: 3.50  
Processing Host: hpdl

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	980.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml) FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.005	13.019	(1.000)	0.9532	40.0000	
\$ 76 Nitrobenzene-d5 (SUR)	82	13.971	13.993	(0.920)	696282	54.2252	111
* 80 Naphthalene-d8	136	15.193	15.212	(1.000)	823083	40.0000	
\$ 77 2-Fluorobiphenyl (SUR)	172	16.987	17.003	(0.937)	966609	46.1822	94
* 82 Acenaphthene-d10	164	18.124	18.142	(1.000)	632448	40.0000	
* 83 Phenanthrene-d10	188	20.593	20.613	(1.000)	1094056	40.0000	
\$ 78 Terphenyl-d14 (SUR)	244	23.207	23.221	(0.928)	716773	47.8414	93
* 81 Chrysene-d12	240	25.001	25.036	(1.000)	730960	40.0000	
* 84 Perylene-d12	264	28.504	28.547	(1.000)	713048	40.0000	

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5007.d

Date : 08-NOV-2000 20:09

Client ID: MW-11D

Sample Info: 238251;980;2;1

Purge Volume: 980.0

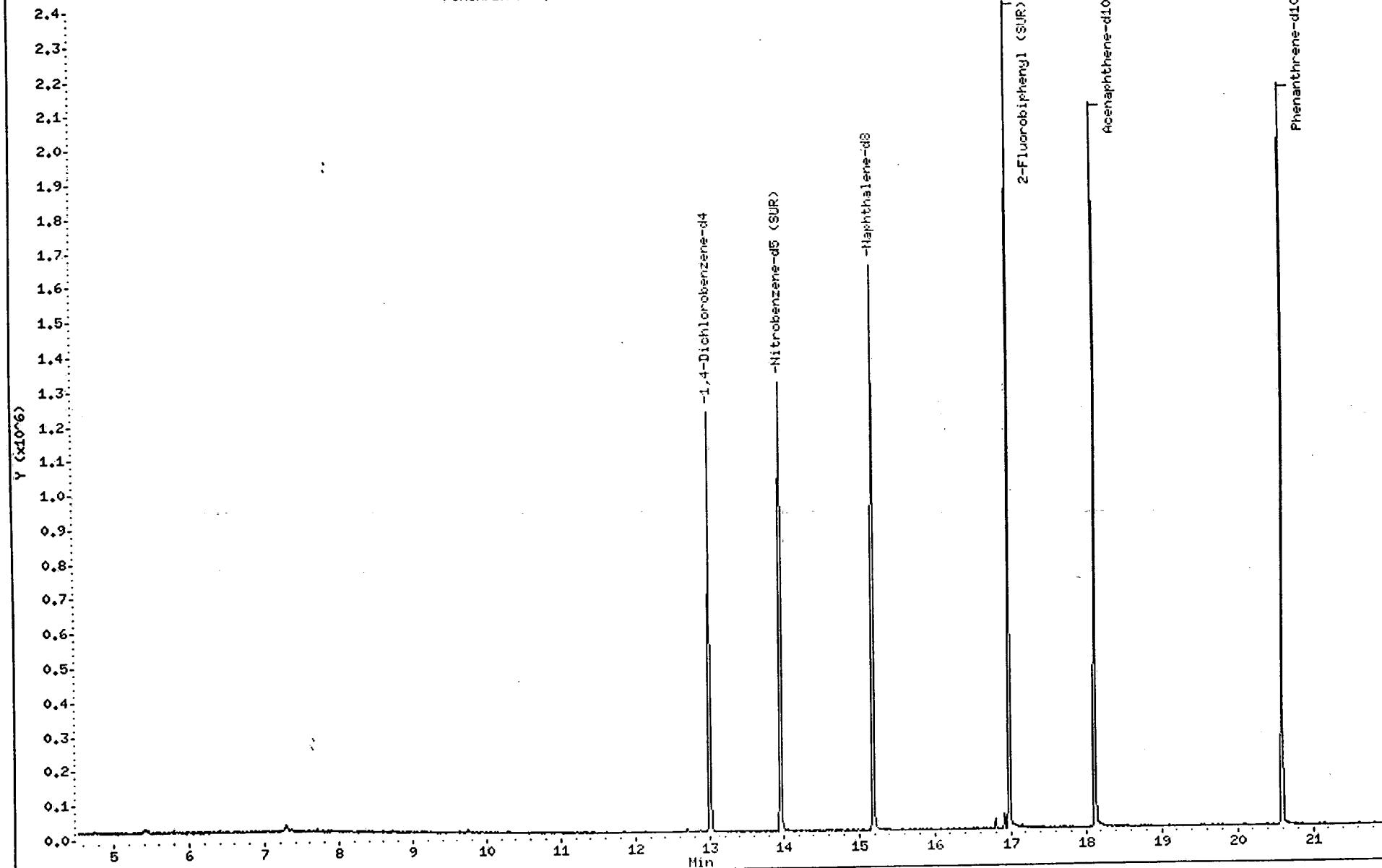
Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

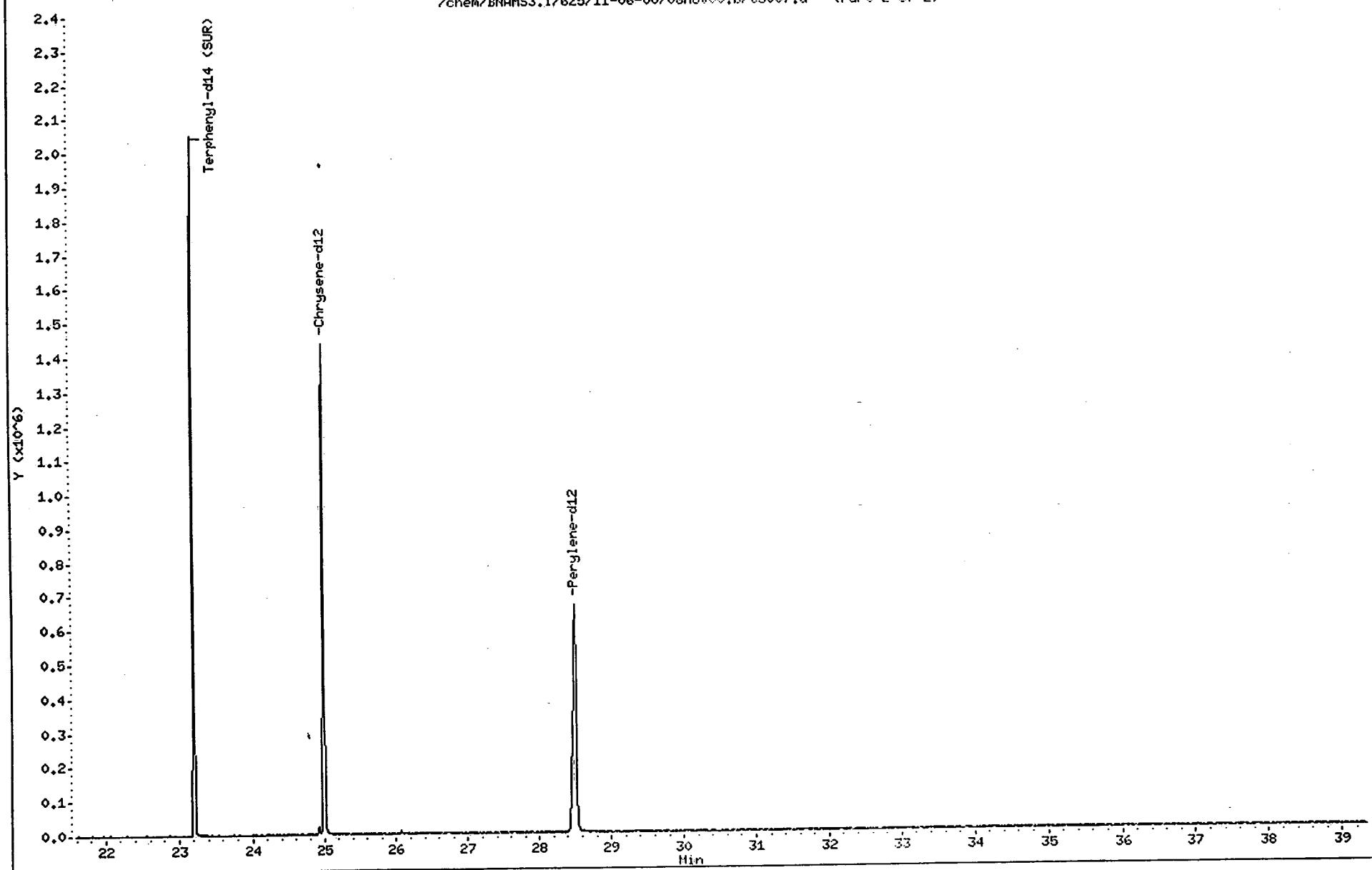
/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5007.d (Part 1 of 2)



Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5007.d  
Date : 08-NOV-2000 20:09  
Client ID: MW-11D  
Sample Info: 238251;980;2;1  
Purge Volume: 980.0  
Column phase: DB-5

Instrument: BNAMS3.i  
Operator: BNAMS 3  
Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5007.d (Part 2 of 2)



Client ID: MW-4  
Site: L.E. Carpenter

Lab Sample No: 238252  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5008.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units:</u> ug/l	<u>Units:</u> ug/l
bis(2-Ethylhexyl)phthalate	210	2.0

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5008.d  
Report Date: 09-Nov-2000 09:26

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5008.d  
Lab Smp Id: 238252 Client Smp ID: MW-4  
Inj Date : 08-NOV-2000 20:58  
Operator : BNAMS 3 Inst ID: BNAMS3.i  
Smp Info : 238252;990;2;1  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/08nov00.b/BNA625b.m  
Meth Date : 08-Nov-2000 09:11 emmylou Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 16  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: Bis2phb.sub  
Target Version: 3.50  
Processing Host: hpdl

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	990.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RT	RESPONSE	ON-COLUMN (ug/ml) ug/L
* 79 1,4-Dichlorobenzene-d4	152	13.001	13.019	1.001	14260	40.0000		
\$ 76 Nitrobenzene-d5 (SUR)	82	13.963	13.990	0.920	622606	50.7467	100	
* 80 Naphthalene-d8	136	15.190	15.212	(1.000)	791217	40.0000		
\$ 77 2-Fluorobiphenyl (SUR)	172	16.984	17.003	(0.937)	881005	42.6700	86	
* 82 Acenaphthene-d10	164	18.121	18.142	(1.000)	623885	40.0000		
* 83 Phenanthrene-d10	188	20.591	20.613	(1.000)	1072674	40.0000		
\$ 78 Terphenyl-d14 (SUR)	244	23.205	23.221	(0.928)	626928	44.8125	90	
63 bis(2-Ethylhexyl)phthalate	149	24.941	24.949	(0.998)	2277721	105.173	210	
* 81 Chrysene-d12	240	25.001	25.036	(1.000)	682544	40.0000		
* 84 Perylene-d12	264	28.507	28.547	(1.000)	715082	40.0000		

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5008.d

Date : 08-NOV-2000 20:58

Client ID: MW-4

Sample Info: 238252;990;2;1

Purge Volume: 990.0

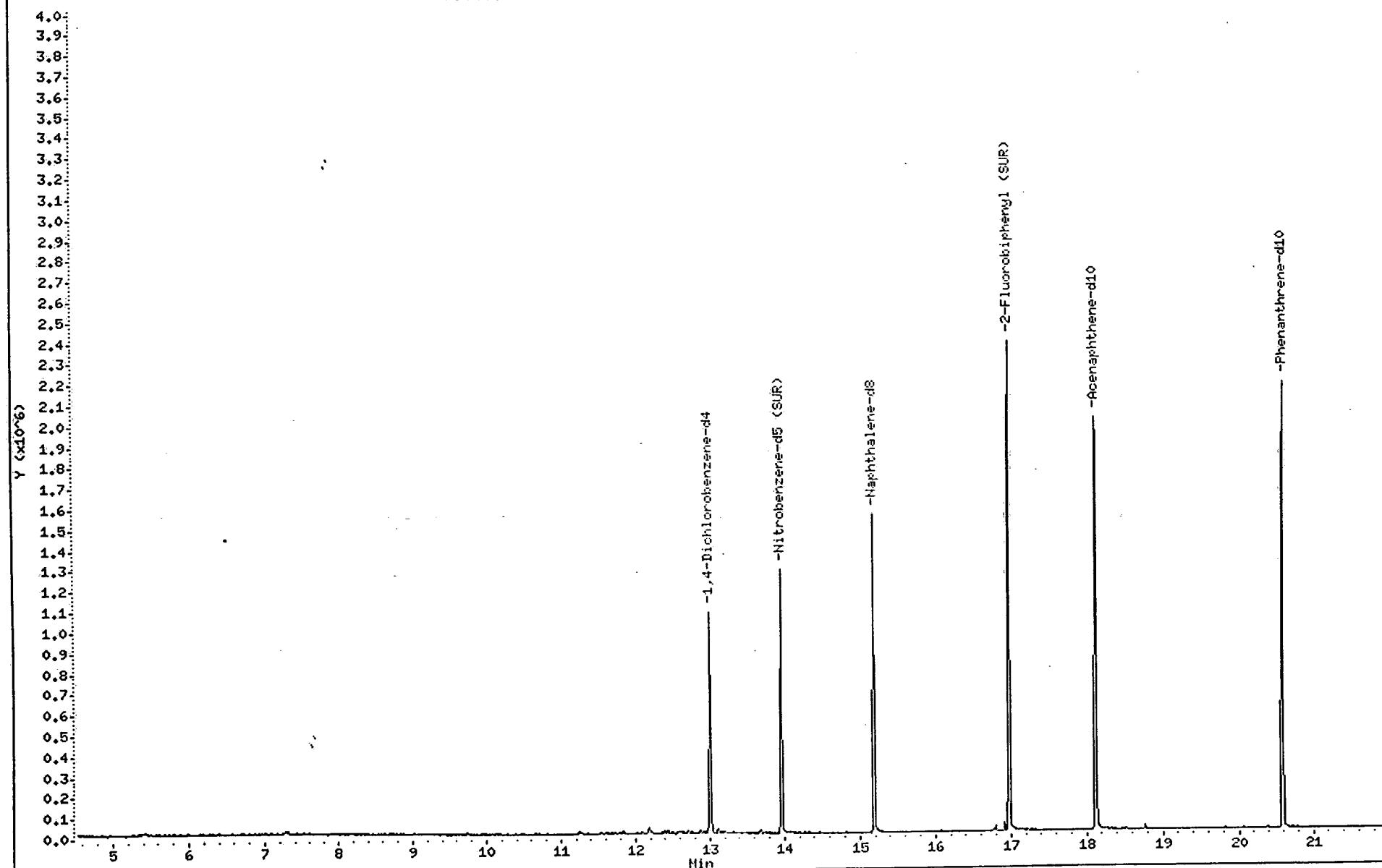
Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5008.d (Part 1 of 2)



Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5008.d

Date : 08-NOV-2000 20:58

Client ID: MW-4

Sample Info: 238252;990;2;1

Purge Volume: 990.0

Column phase: DB-5

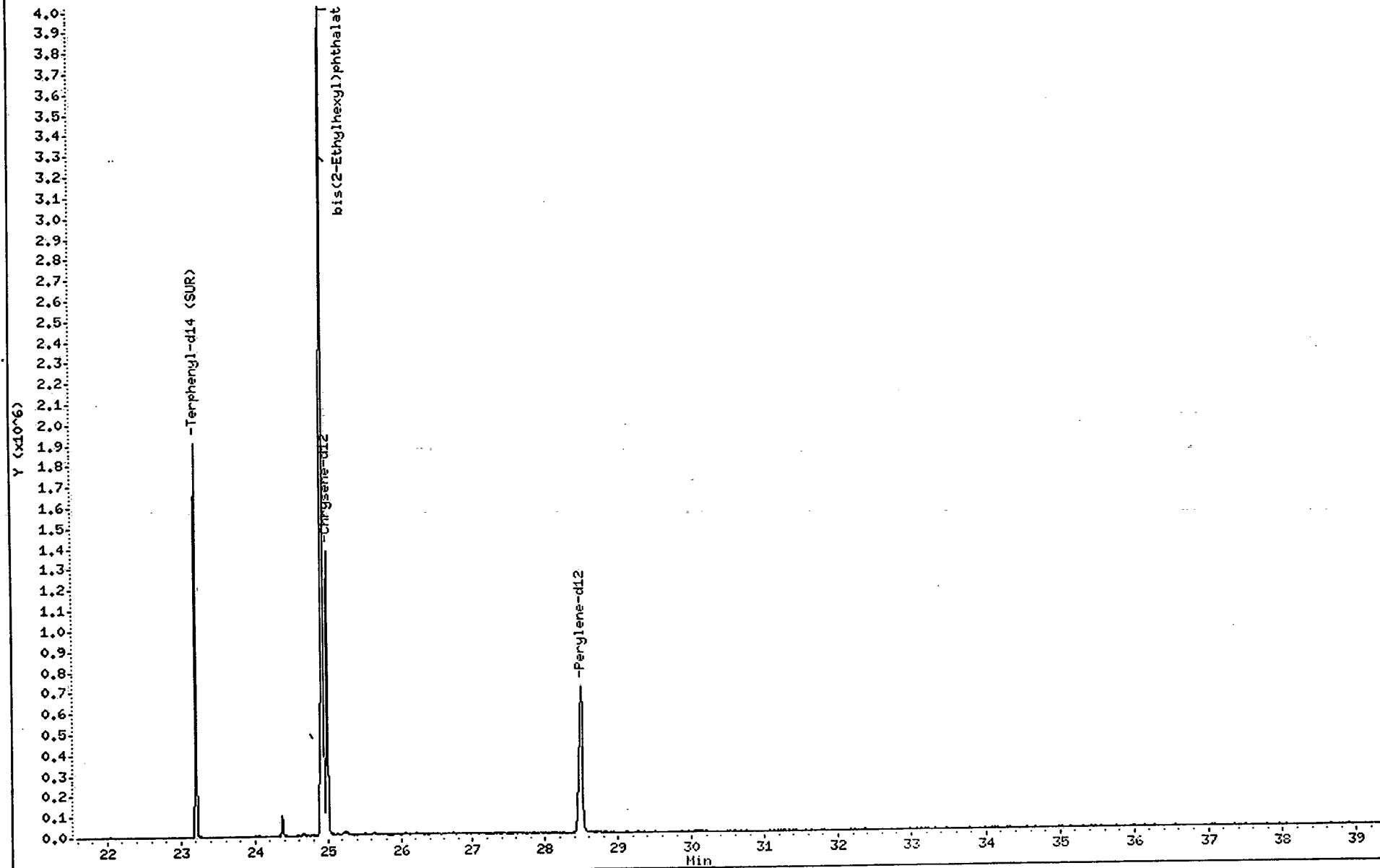
Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

51

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5008.d (Part 2 of 2)



Data File: /chem/BNAHS3.i/625/11-06-00/08nov00.b/t5008.d

Date : 08-NOV-2000 20:58

Client ID: HM-4

Sample Info: 238252;990;2:1

Purge Volume: 990.0

Column Phase: DB-5

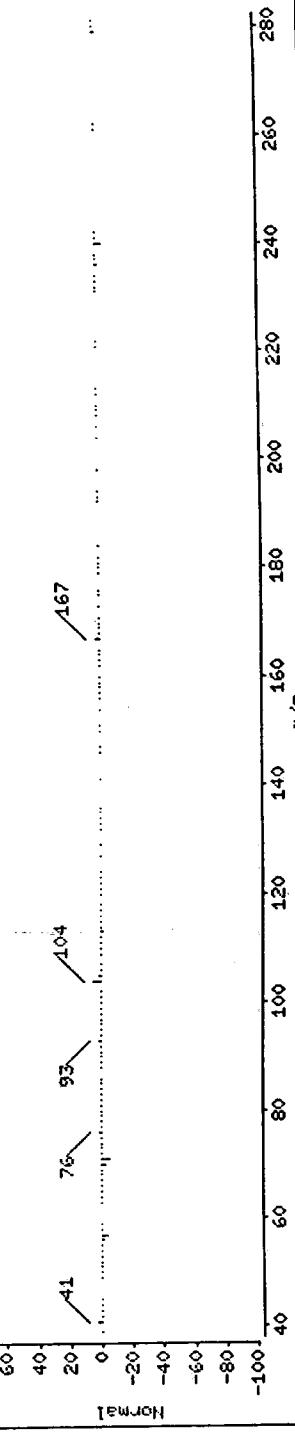
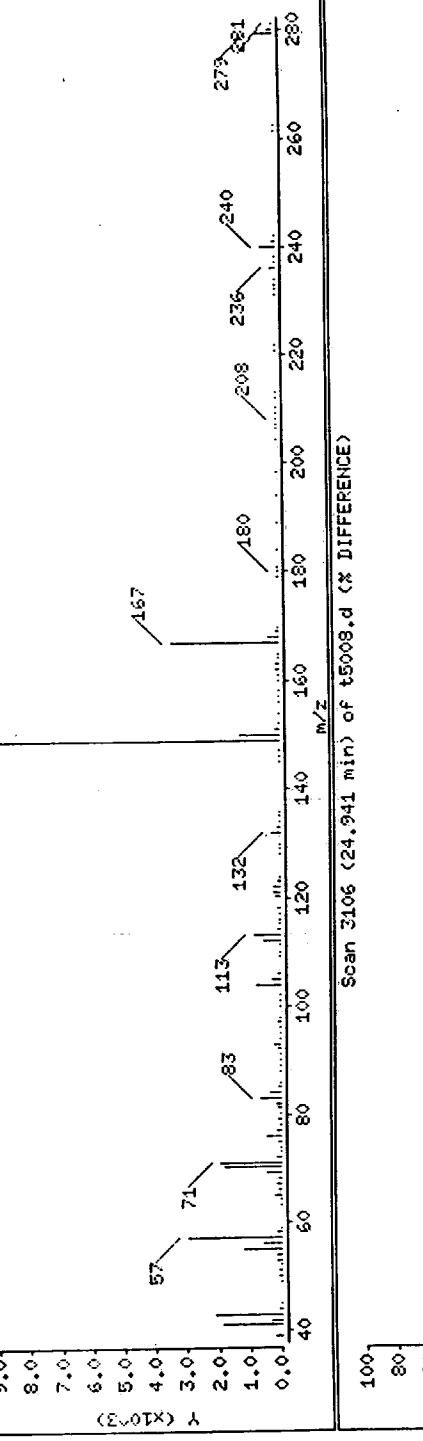
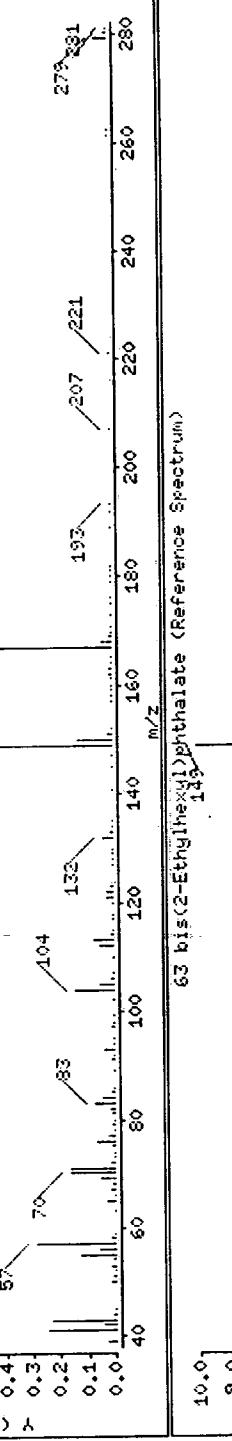
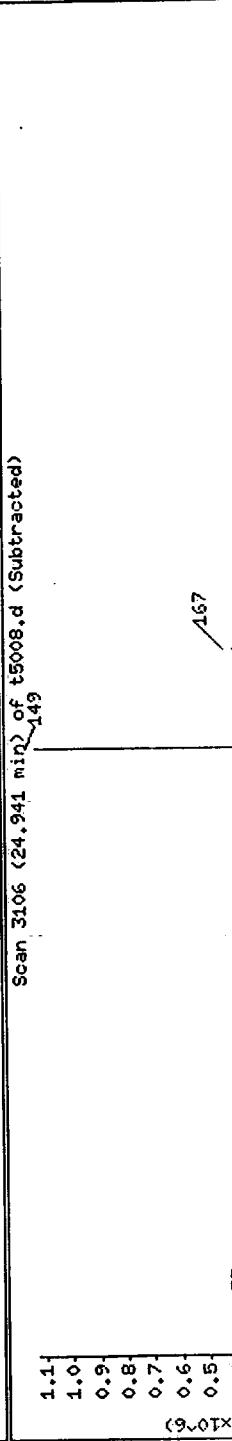
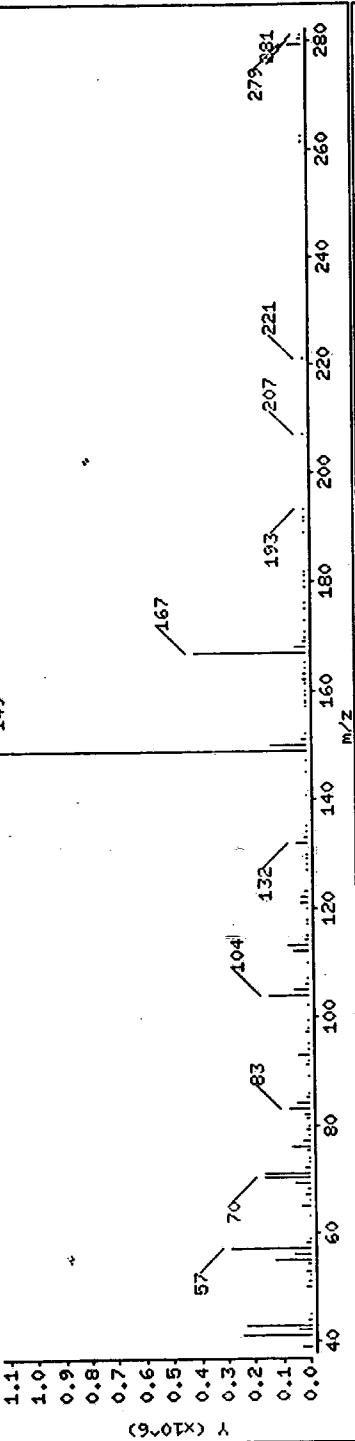
Instrument: BNAHS3.i

Operator: BNAHS 3

Column diameter: 0.53

63 bis(2-Ethylhexyl)phthalate

Scan 3106 (24.941 min) of t5008.d  
Concentration: 210 ug/L



Client ID: MW-17S  
Site: L.E. Carpenter

Lab Sample No: 238253  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/08/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5009.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units:</u> ug/l	<u>Units:</u> ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5009.d  
Report Date: 09-Nov-2000 09:26

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5009.d  
Lab Smp Id: 238253 Client Smp ID: MW-17S  
Inj Date : 08-NOV-2000 21:46  
Operator : BNAMS 3 Inst ID: BNAMS3.i  
Smp Info : 238253;990;2;1  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/08nov00.b/BNA625b.m  
Meth Date : 08-Nov-2000 09:11 emmylou Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 17  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50 Compound Sublist: Bis2phb.sub  
Processing Host: hpdl

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	990.00000	Volume of sample extracted (mL)

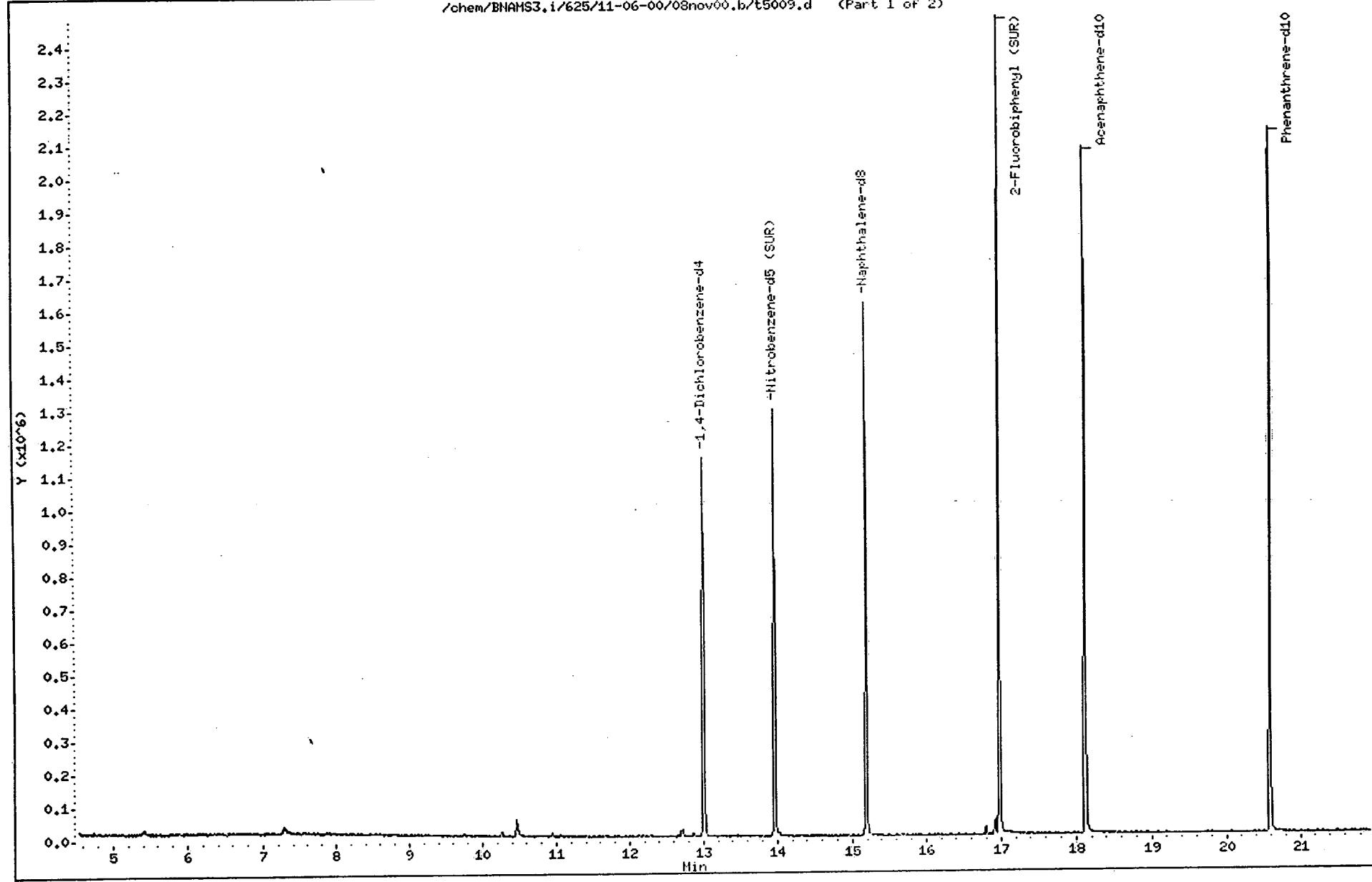
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)	FINAL ( ug/L)
* 79 1,4-Dichlorobenzene-d4	====	152	13.006	13.019	1.000	319181	40.0000	
\$ 76 Nitrobenzene-d5 (SUR)	====	82	13.965	13.990	0.919	599179	54.5173	110
* 80 Naphthalene-d8	====	136	15.194	15.212	(1.000)	827073	40.0000	
\$ 77 2-Fluorobiphenyl (SUR)	====	172	16.981	17.003	(0.937)	995908	47.9954	97
* 82 Acenaphthene-d10	====	164	18.125	18.142	(1.000)	620706	40.0000	
* 83 Phenanthrene-d10	====	188	20.594	20.613	(1.000)	1116279	40.0000	
\$ 78 Terphenyl-d14 (SUR)	====	244	23.209	23.221	(0.928)	707047	48.4065	98
* 81 Chrysene-d12	====	240	25.003	25.036	(1.000)	712618	40.0000	
* 84 Perylene-d12	====	264	28.506	28.547	(1.000)	713504	40.0000	

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5009.d  
Date : 08-NOV-2000 21:46  
Client ID: MW-17S  
Sample Info: 238253;990;2;1  
Purge Volume: 990.0  
Column phaset DB-5

Instrument: BNAMS3.i  
Operator: BNAMS 3  
Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5009.d (Part 1 of 2)



Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5009.d

Date : 08-NOV-2000 21:46

Client ID: MW-17S

Sample Info: 238253;990;2;1

Purge Volume: 990.0

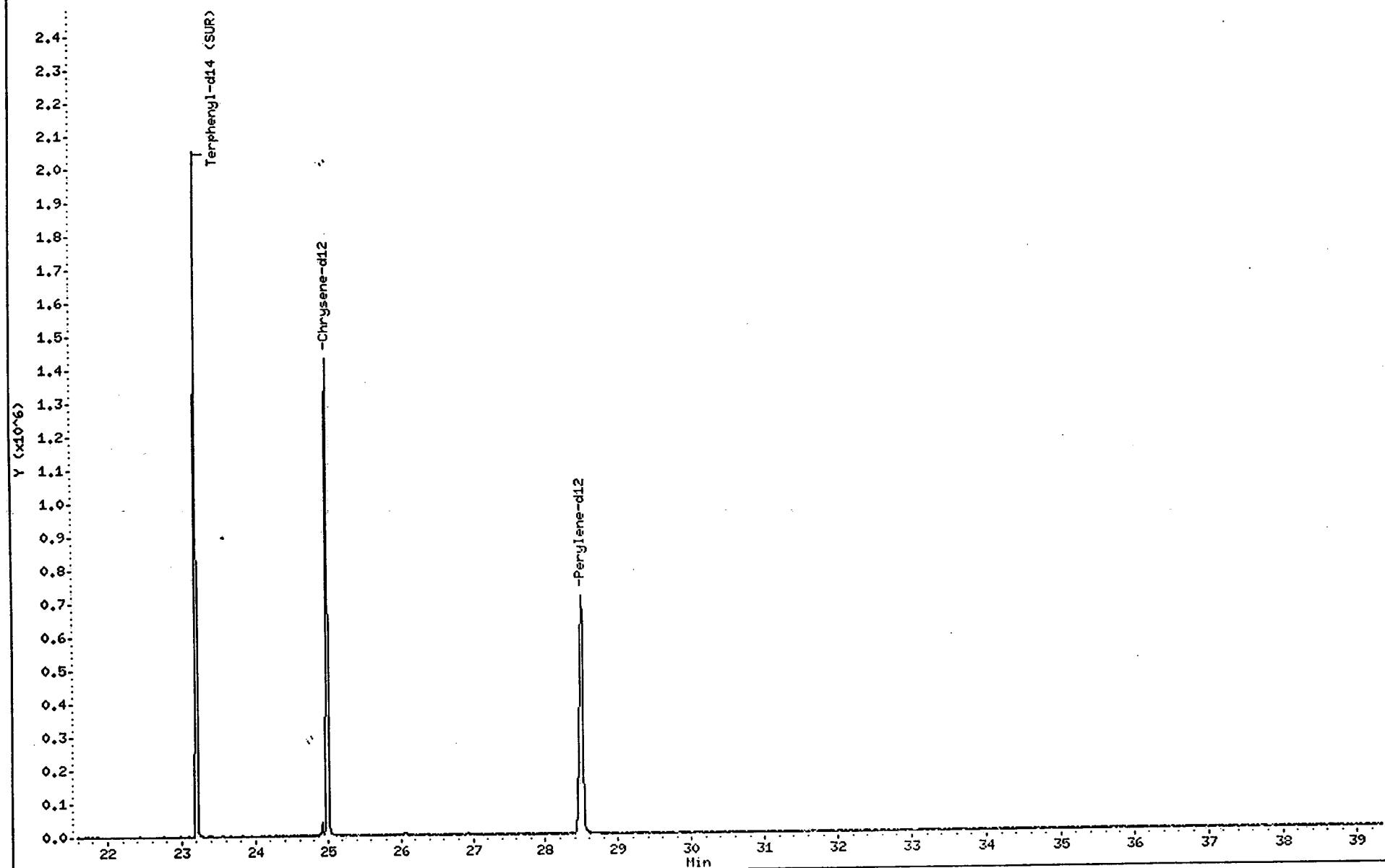
Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5009.d (Part 2 of 2)



Client ID: MW-22R  
Site: L.E. Carpenter

Lab Sample No: 238254  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5027.d

Matrix: WATER  
Level: LOW  
Sample Volume: 980 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 50.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection Limit</u> <u>Units: ug/l</u>
bis(2-Ethylhexyl)phthalate	5100	100

Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5027.d  
Report Date: 10-Nov-2000 11:11

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5027.d  
Lab Smp Id: 238254 Client Smp ID: MW-22R  
Inj Date : 09-NOV-2000 13:37  
Operator : BNAMS 3 *UD* Inst ID: BNAMS3.i  
Smp Info : 238254;980;2;50  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/09nov00.b/BNA625b.m  
Meth Date : 10-Nov-2000 10:13 rui Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 7  
Dil Factor: 50.00000  
Integrator: HP RTE Compound Sublist: Bis2phb.sub  
Target Version: 3.50  
Processing Host: hpdl

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	50.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	980.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)	FINAL ( ug/L)
* 79 1,4-Dichlorobenzene-d <sub>4</sub>	152	13.008	13.026	1.000		226417	40.0000	
* 80 Naphthalene-d <sub>8</sub>	136	15.196	15.213	1.000		861380	40.0000	
* 82 Acenaphthene-d <sub>10</sub>	154	18.126	18.142	(1.000)		652169	40.0000	
* 83 Phenanthrene-d <sub>10</sub>	188	20.596	20.613	(1.000)		1189124	40.0000	
63 bis(2-Ethylhexyl)phthalate	149	24.938	24.954	(0.997)		1166187	49.6803	5100
* 81 Chrysene-d <sub>12</sub>	240	25.011	25.034	(1.000)		739805	40.0000	
* 84 Perylene-d <sub>12</sub>	264	28.519	28.551	(1.000)		731335	40.0000	

Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5027.d

Date : 09-NOV-2000 13:37

Client ID: HW-22R

Sample Info: 238254;980;2;50

Purge Volume: 980.0

Column phase: DB-5

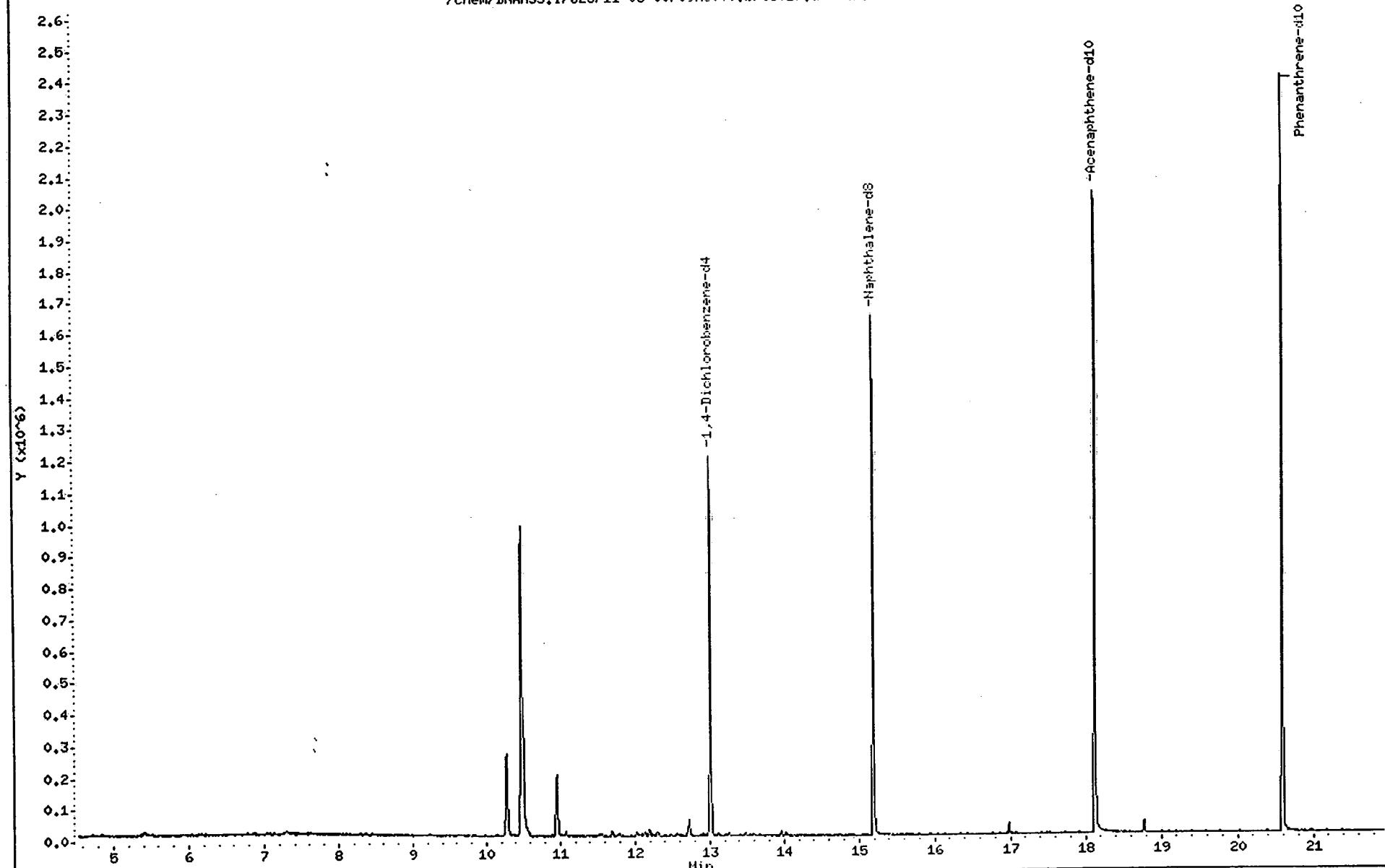
Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

59

/chem/BNAMS3.i/625/11-06-00/09nov00.b/t5027.d (Part 1 of 2)



Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5027.d

Date : 09-NOV-2000 13:37

Client ID: MW-22R

Sample Info: 238254;980;2;50

Purge Volume: 980.0

Column phase: DB-5

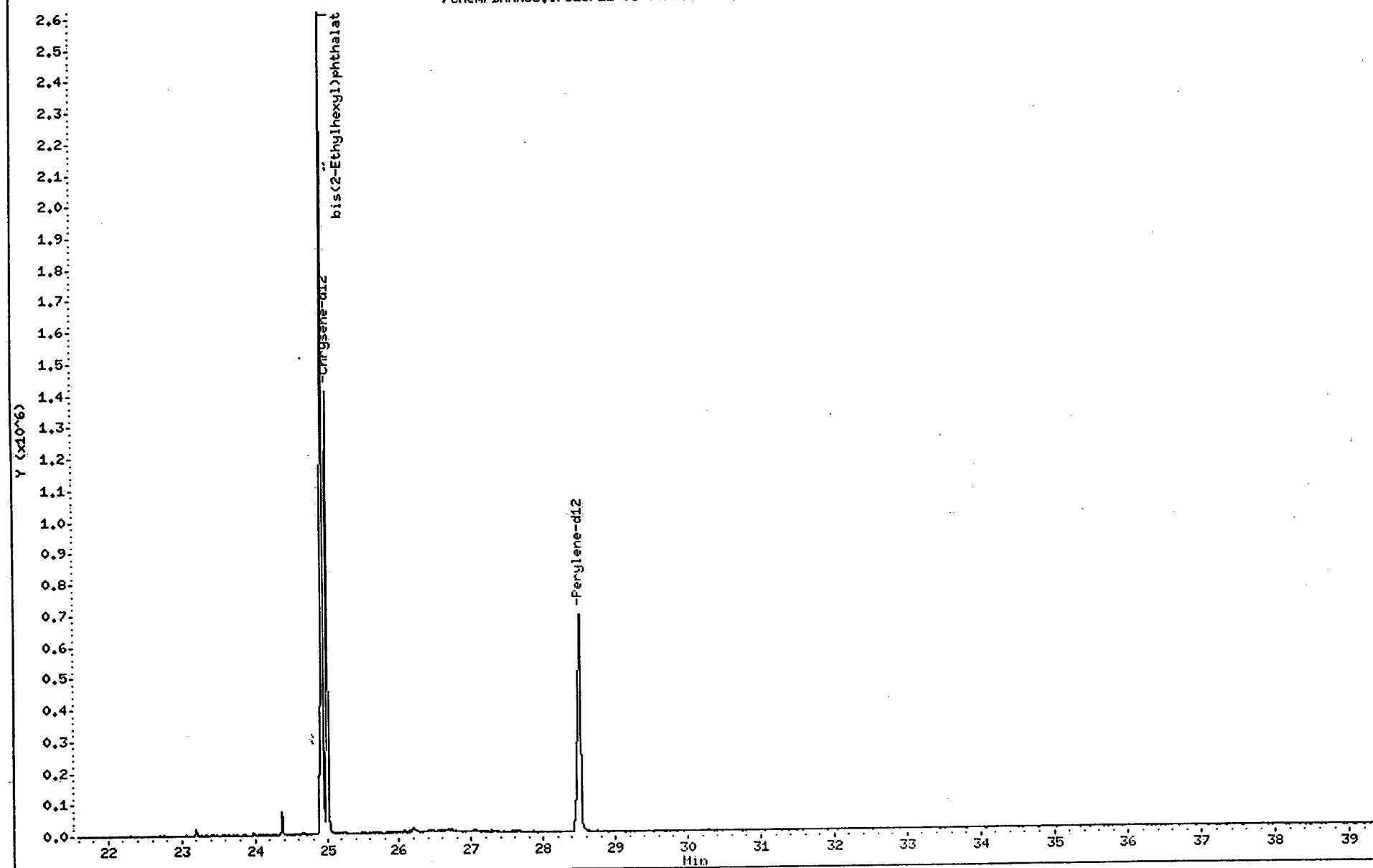
Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

60

/chem/BNAMS3.i/625/11-06-00/09nov00.b/t5027.d (Part 2 of 2)



Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5027.d

Date : 09-NOV-2000 13:37

Client ID: HW-22R

Instrument: BNAMS3.i

Sample Info: 238254;980;2;50

Operator: BNAMS 3

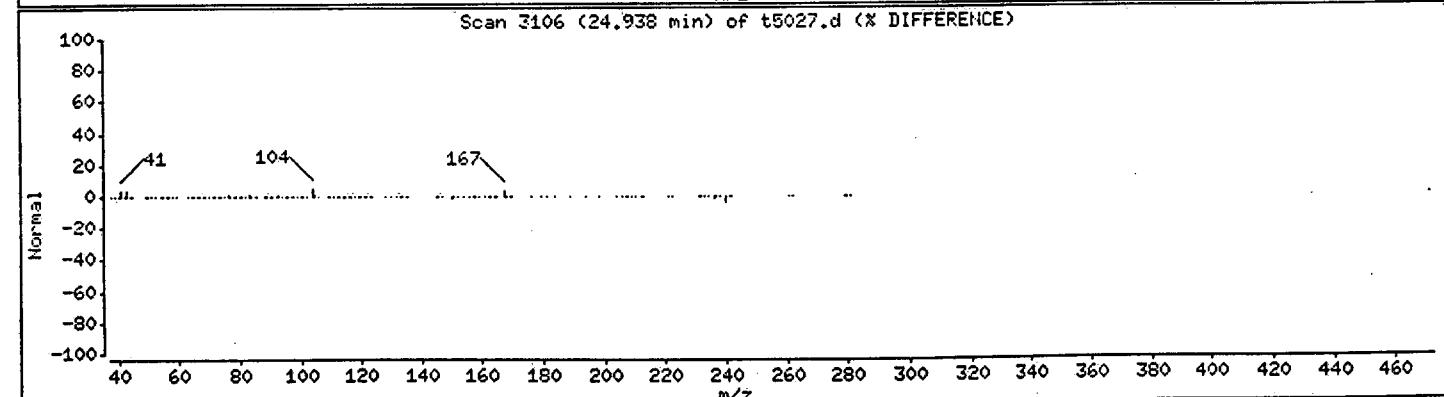
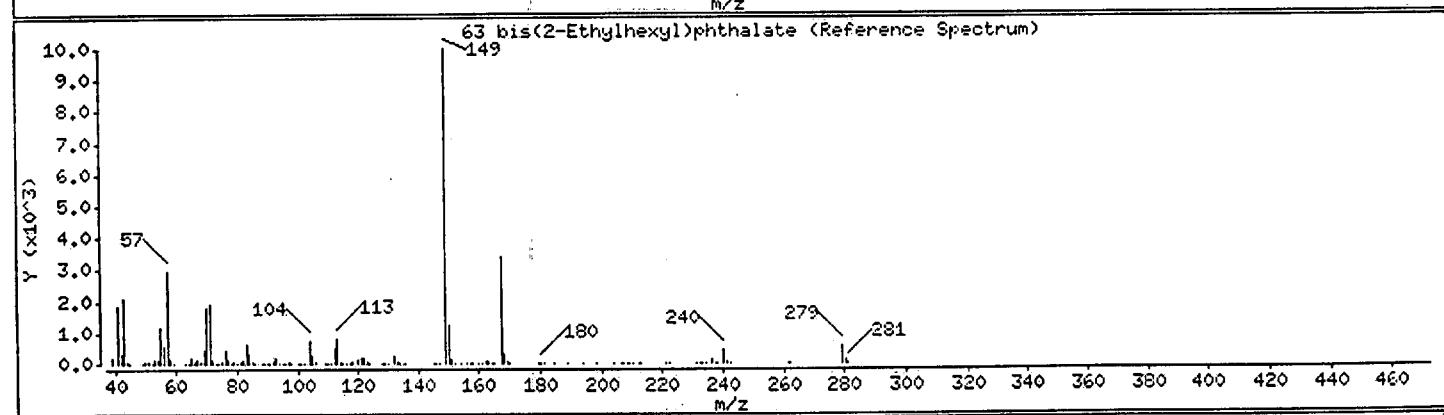
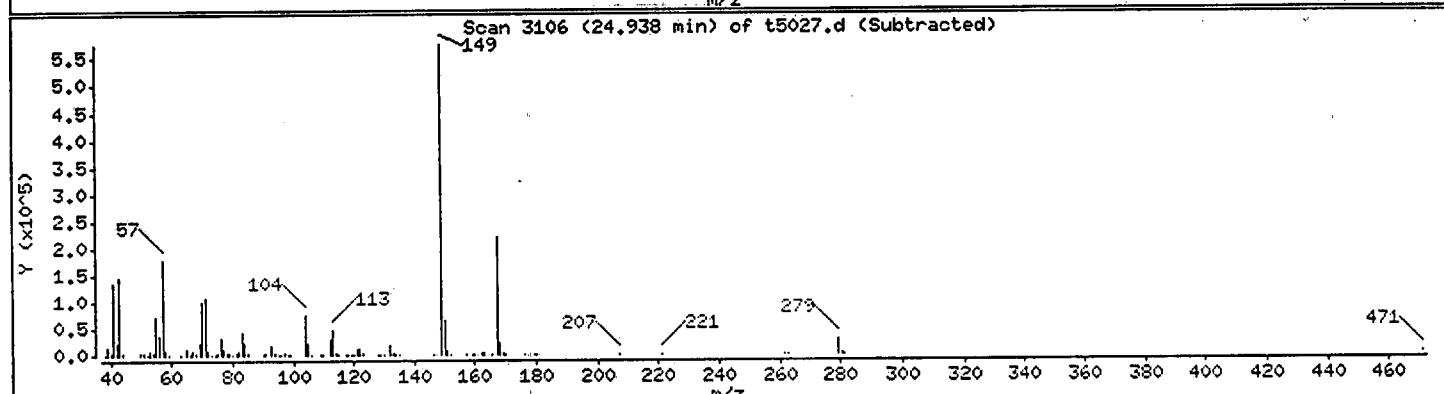
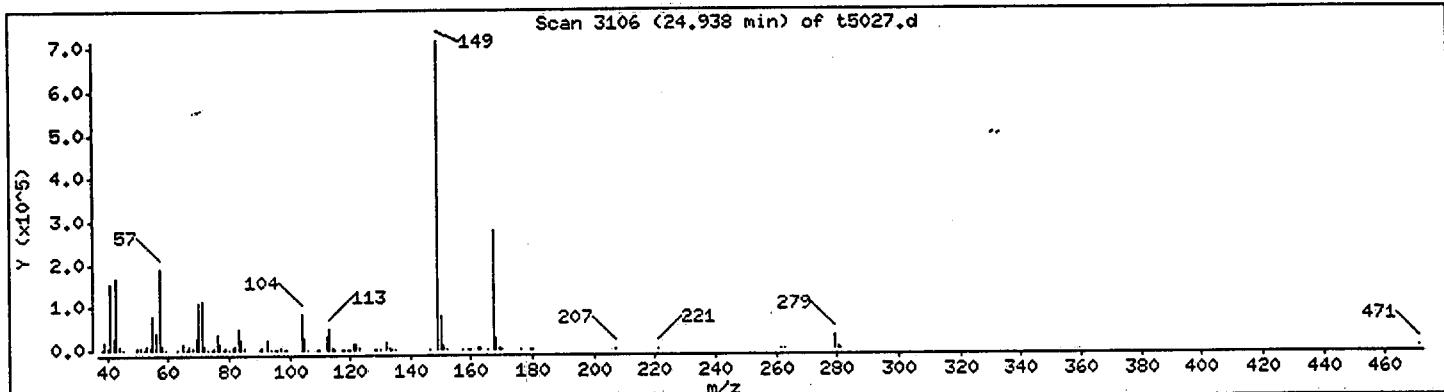
Purge Volume: 980.0

Column diameter: 0.53

Column phase: DB-5

Concentration: 5100 ug/L

63 bis(2-Ethylhexyl)phthalate



Client ID: MW-25R  
Site: L.E. Carpenter

Lab Sample No: 238255  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5026.d

Matrix: WATER  
Level: LOW  
Sample Volume: 980 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
bis(2-Ethylhexyl)phthalate	3.4	2.0

Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5026.d  
Report Date: 10-Nov-2000 11:11

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5026.d  
Lab Smp Id: 238255 Client Smp ID: MW-25R  
Inj Date : 09-NOV-2000 12:49  
Operator : BNAMS 3 *CD* Inst ID: BNAMS3.i  
Smp Info : 238255;980;2;1  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/09nov00.b/BNA625b.m  
Meth Date : 10-Nov-2000 10:13 rui Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 6  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: Bis2phb.sub  
Target Version: 3.50  
Processing Host: hpdl

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	980.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

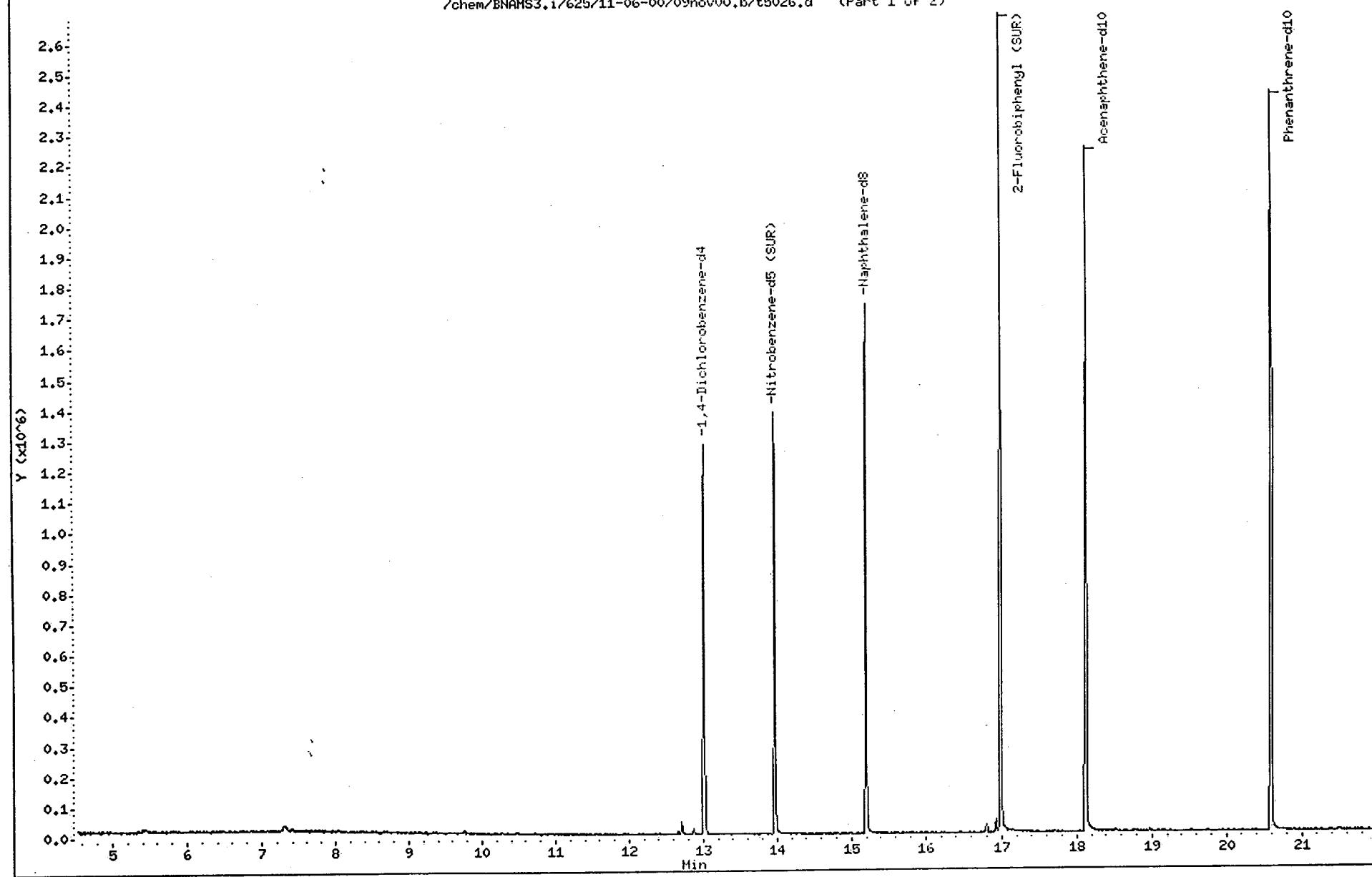
Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)	FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4	152	13.013	13.026	(1.000)	249469	40.0000		
\$ 76 Nitrobenzene-d5 (SUR)	82	13.572	13.590	(0.919)	692980	47.8074		92
* 80 Naphthalene-d8	136	15.201	15.213	(1.000)	934792	40.0000		
\$ 77 2-Fluorobiphenyl (SUR)	172	16.933	17.003	(0.937)	1054172	45.2476		92
* 82 Acenaphthene-d10	164	18.132	18.142	(1.000)	703987	40.0000		
* 83 Phenanthrene-d10	188	20.595	20.613	(1.000)	1302779	40.0000		
\$ 78 Terphenyl-d14 (SUR)	244	23.217	23.223	(0.928)	767930	45.4045		93
63 bis(2-Ethylhexyl)phthalate	149	24.926	24.954	(0.997)	43458	1.65985		3.4
* 81 Chrysene-d12	240	25.012	25.034	(1.000)	825154	40.0000		
* 84 Perylene-d12	264	28.517	28.551	(1.000)	788291	40.0000		

Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5026.d  
Date : 09-NOV-2000 12:49  
Client ID: MW-25R  
Sample Info: 238255;980;2;1  
Purge Volume: 980.0  
Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS 3  
Column diameter: 0.53

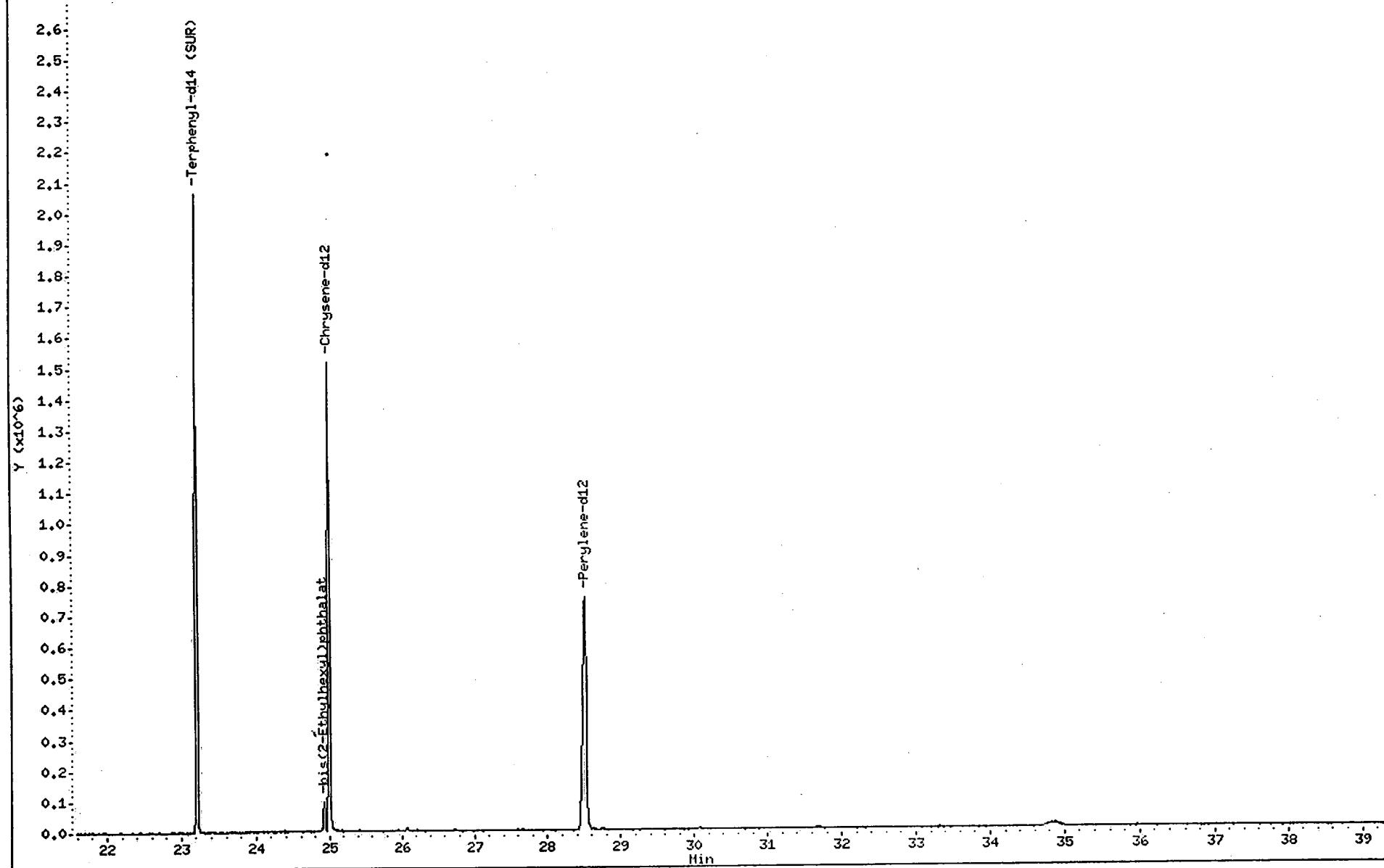
/chem/BNAMS3.i/625/11-06-00/09nov00.b/t5026.d (Part 1 of 2)



Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5026.d  
Date : 09-NOV-2000 12:49  
Client ID: MW-25R  
Sample Info: 238255;980;2;1  
Purge Volume: 980.0  
Column phase: DB-5

Instrument: BNAMS3.i  
Operator: BNAMS 3  
Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/09nov00.b/t5026.d (Part 2 of 2)



Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5026.d

Date : 09-NOV-2000 12:49

Client ID: MW-25R

Instrument: BNAMS3.i

Sample Info: 238255;980;2;1

Purge Volume: 980.0

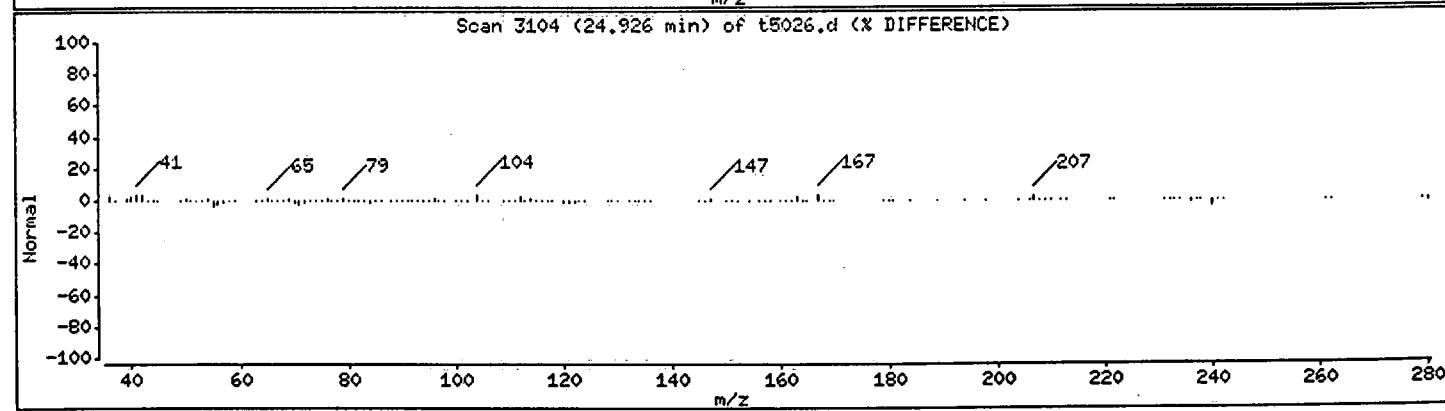
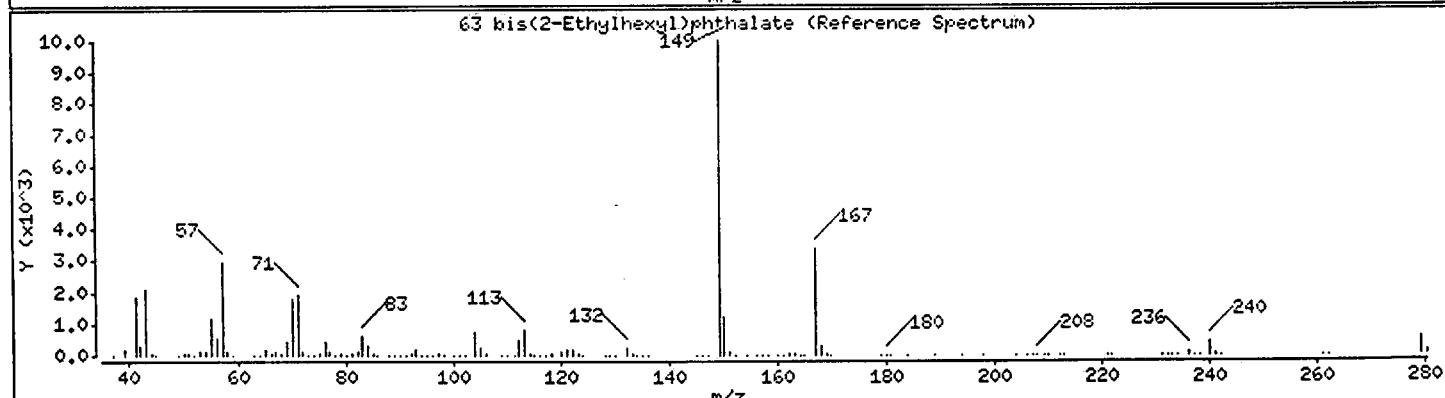
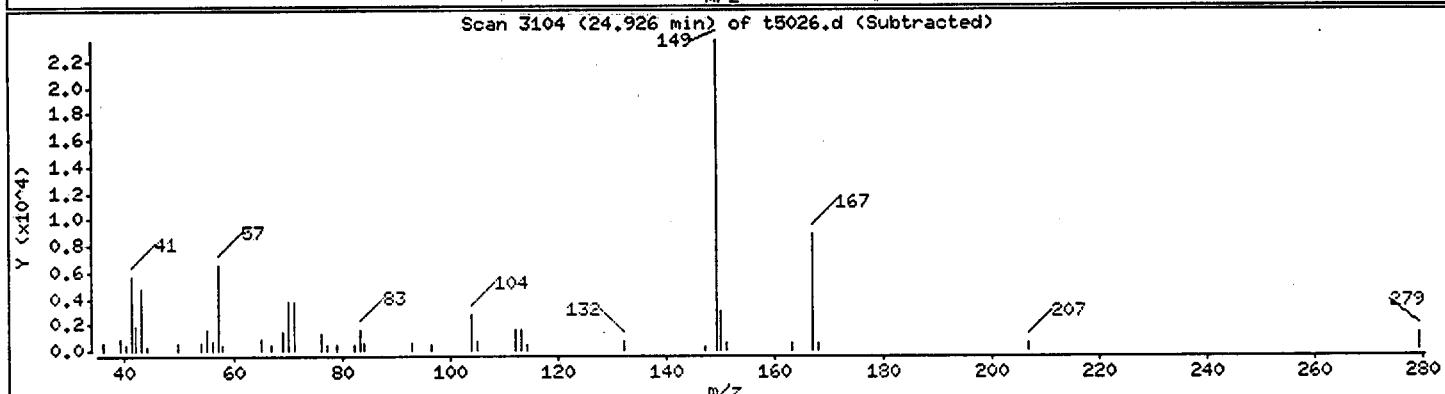
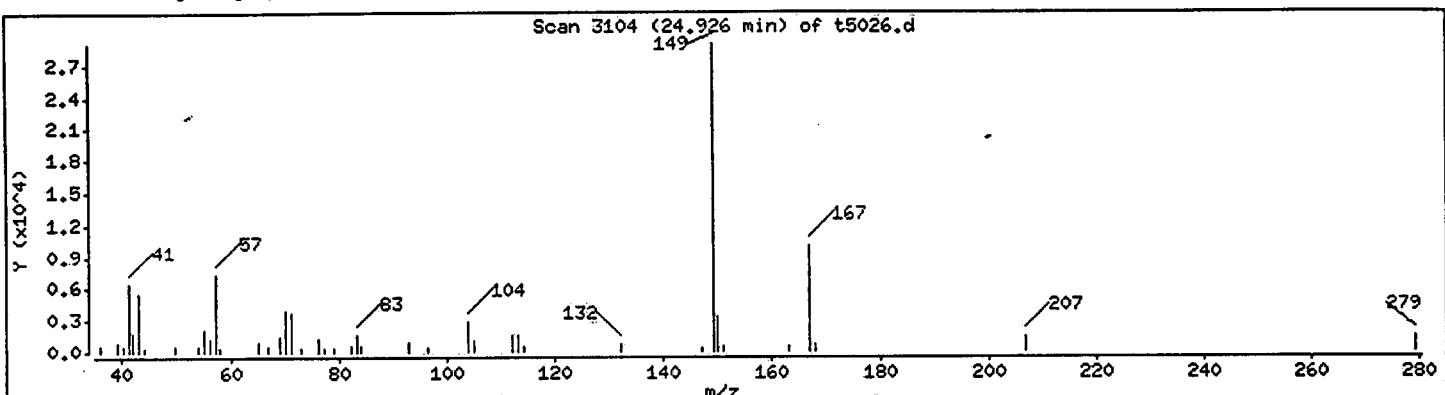
Operator: BNAMS 3

Column phase: DB-5

Column diameter: 0.53

63 bis(2-Ethylhexyl)phthalate

Concentration: 3.4 ug/L



Client ID: MW-14I  
Site: L.E. Carpenter

Lab Sample No: 238256  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5012.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection Limit</u> <u>Units: ug/l</u>
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5012.d  
Report Date: 09-Nov-2000 09:26

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5012.d  
Lab Smp Id: 238256 Client Smp ID: MW-14I  
Inj Date : 09-NOV-2000 00:10  
Operator : BNAMS 3 Inst ID: BNAMS3.i  
Smp Info : 238256;990;2;1  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/08nov00.b/BNA625b.m  
Meth Date : 08-Nov-2000 09:11 emmylou Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 20  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: Bis2phb.sub  
Target Version: 3.50  
Processing Host: hpdl

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	990.00000	Volume of sample extracted (mL)

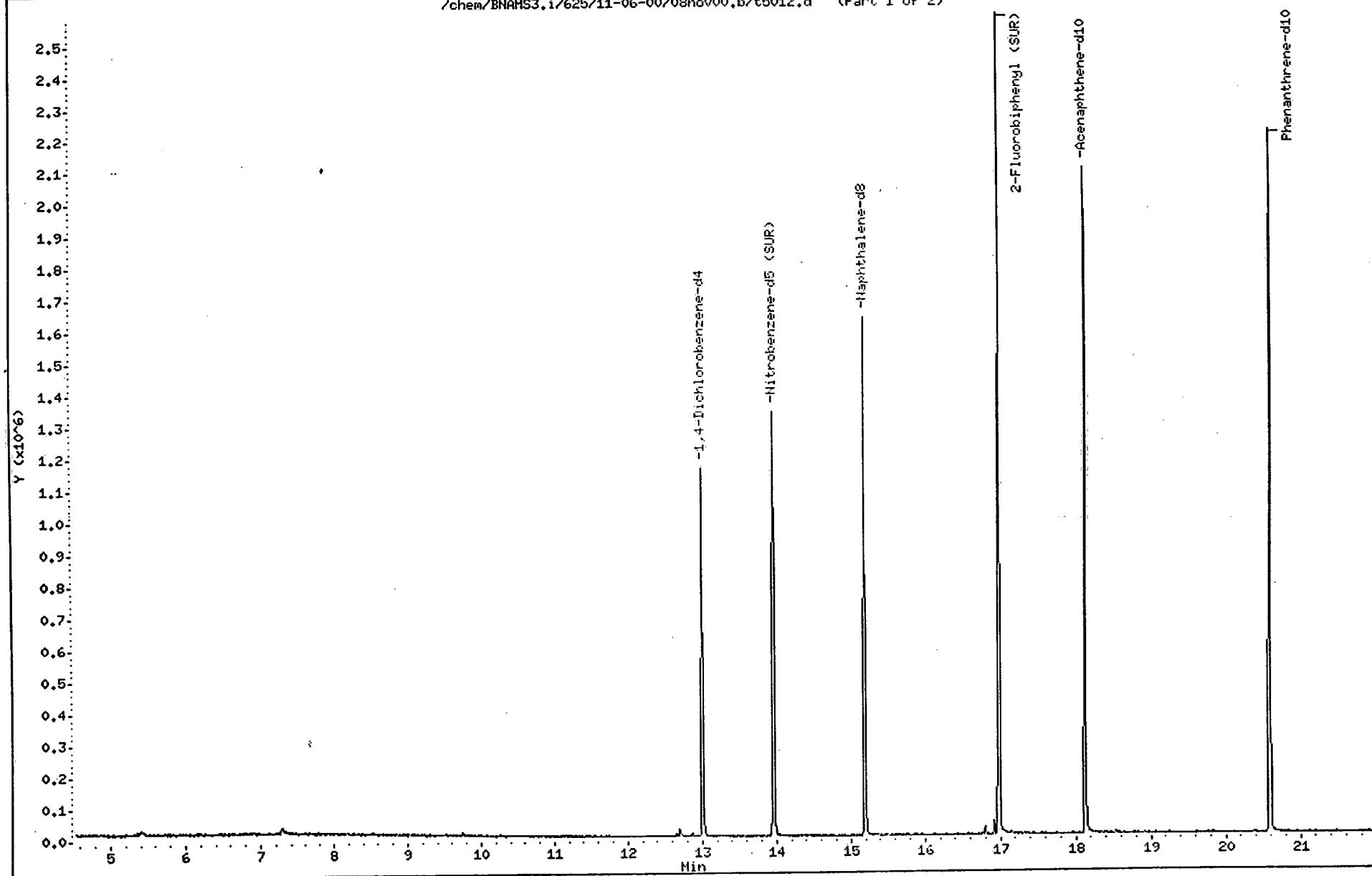
Cpnd Variable Local Compound Variable

Compounds	QUANT-SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)	FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4		152	13.004	13.019	1.000	226216	40.0000	
\$ 76 Nitrobenzene-d5 (SUR)		82	13.970	13.990	(0.920)	695527	53.8995	110
* 80 Naphthalene-d8		136	15.192	15.212	(1.000)	833380	40.0000	
\$ 77 2-Fluorobiphenyl (SUR)		172	16.986	17.003	(0.937)	961025	46.8849	95
* 82 Acenaphthene-d10		164	18.123	18.142	(1.000)	619370	40.0000	
* 83 Phenanthrene-d10		188	20.593	20.613	(1.000)	1112890	40.0000	
\$ 78 Terphenyl-d14 (SUR)		244	23.207	23.221	(0.928)	665185	45.0132	91
* 81 Chrysene-d12		240	25.001	25.036	(1.000)	720967	40.0000	
* 84 Perylene-d12		264	28.510	28.547	(1.000)	707285	40.0000	

Data File: /chem/BNAHS3.i/625/11-06-00/08nov00.b/t5012.d  
Date : 09-NOV-2000 00:10  
Client ID: MW-14I  
Sample Info: 238256;990;2;1  
Purge Volume: 990.0  
Column phase: DB-5

Instrument: BNAHS3.i  
Operator: BNAHS 3  
Column diameter: 0.53

/chem/BNAHS3.i/625/11-06-00/08nov00.b/t5012.d (Part 1 of 2)

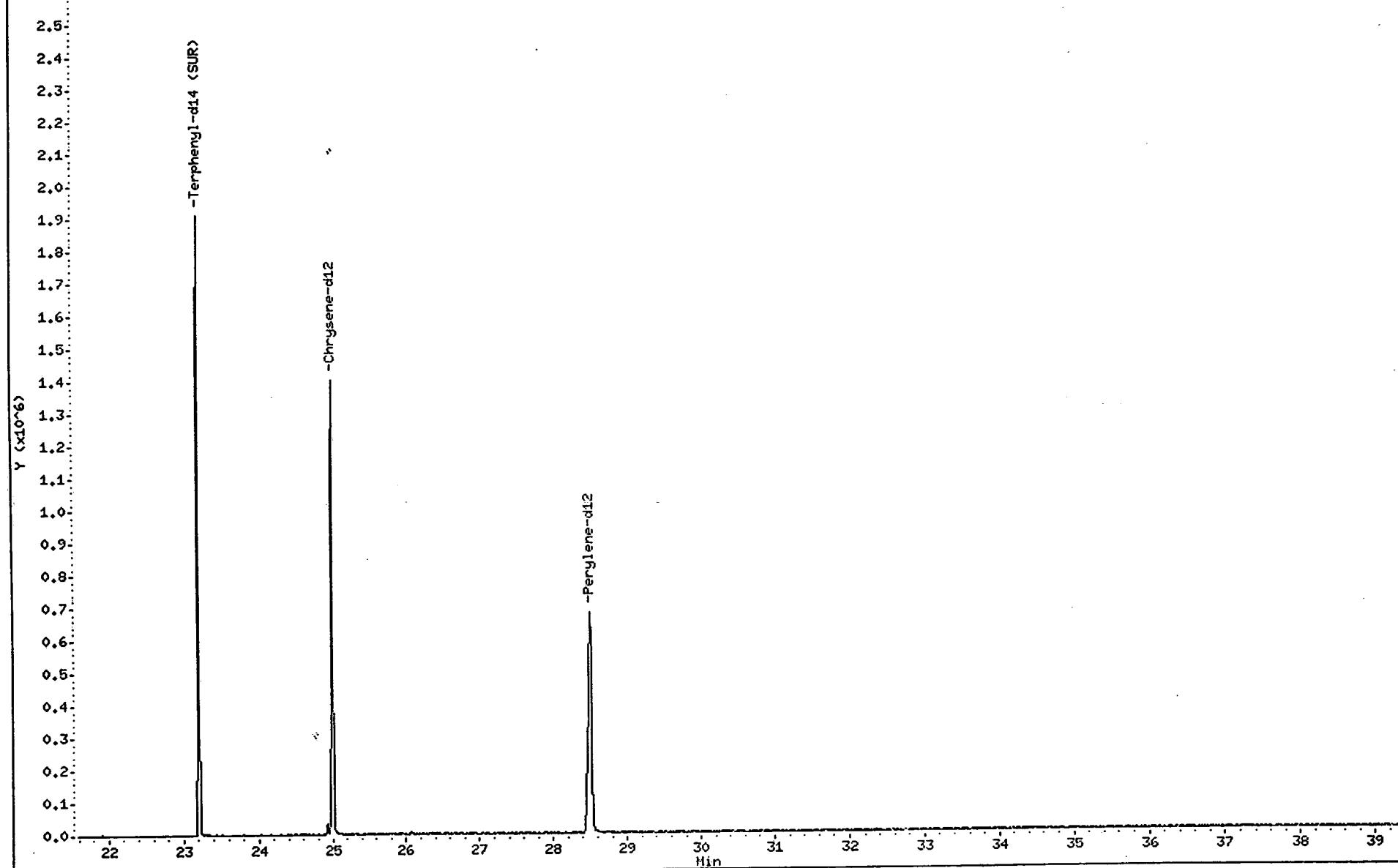


Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5012.d  
Date : 09-NOV-2000 00:10  
Client ID: MW-14I  
Sample Info: 238256;990;2;1  
Purge Volume: 990.0  
Column phase: DB-5

Instrument: BNAMS3.i  
Operator: BNAMS 3  
Column diameter: 0.53

70

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5012.d (Part 2 of 2)



Client ID: MW-21  
Site: L.E. Carpenter

Lab Sample No: 238257  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5013.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection Limit</u> <u>Units: ug/l</u>
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5013.d  
Report Date: 09-Nov-2000 09:26

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5013.d  
Lab Smp Id: 238257 Client Smp ID: MW-21  
Inj Date : 09-NOV-2000 00:58  
Operator : BNAMS 3 Inst ID: BNAMS3.i  
Smp Info : 238257;990;2;1  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/08nov00.b/BNA625b.m  
Meth Date : 08-Nov-2000 09:11 emmylou Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 21  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: Bis2phb.sub  
Target Version: 3.50  
Processing Host: hpdl

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	990.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)	FINAL (ug/L)
* 79 1,4-Dichlorobenzene-d4	====	====	====	====	====	====	====	====
\$ 76 Nitrobenzene-d5 (SUR)	152	13.004	13.019	1.000	223903	40.0000		
* 80 Naphthalene-d8	82	13.970	13.980	0.919	523113	40.7375	82	
\$ 77 2-Fluorobiphenyl (SUR)	135	15.199	15.212	1.000	827100	40.0000		
* 82 Acenaphthene-d10	172	16.936	17.003	0.937	722205	34.3561	69	
* 83 Phenanthrene-d10	164	18.129	18.142	1.000	635192	40.0000		
\$ 78 Terphenyl-d14 (SUR)	188	20.592	20.613	1.000	1083350	40.0000		
* 81 Chrysene-d12	244	23.206	23.221	0.928	553312	36.4314	74	
* 84 Perylene-d12	240	25.007	25.036	1.000	740981	40.0000		
	264	28.516	28.547	1.000	725303	40.0000		

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5013.d

Date : 09-NOV-2000 00:58

Client ID: MM-21

Sample Info: 238257;990;2;1

Purge Volume: 990.0

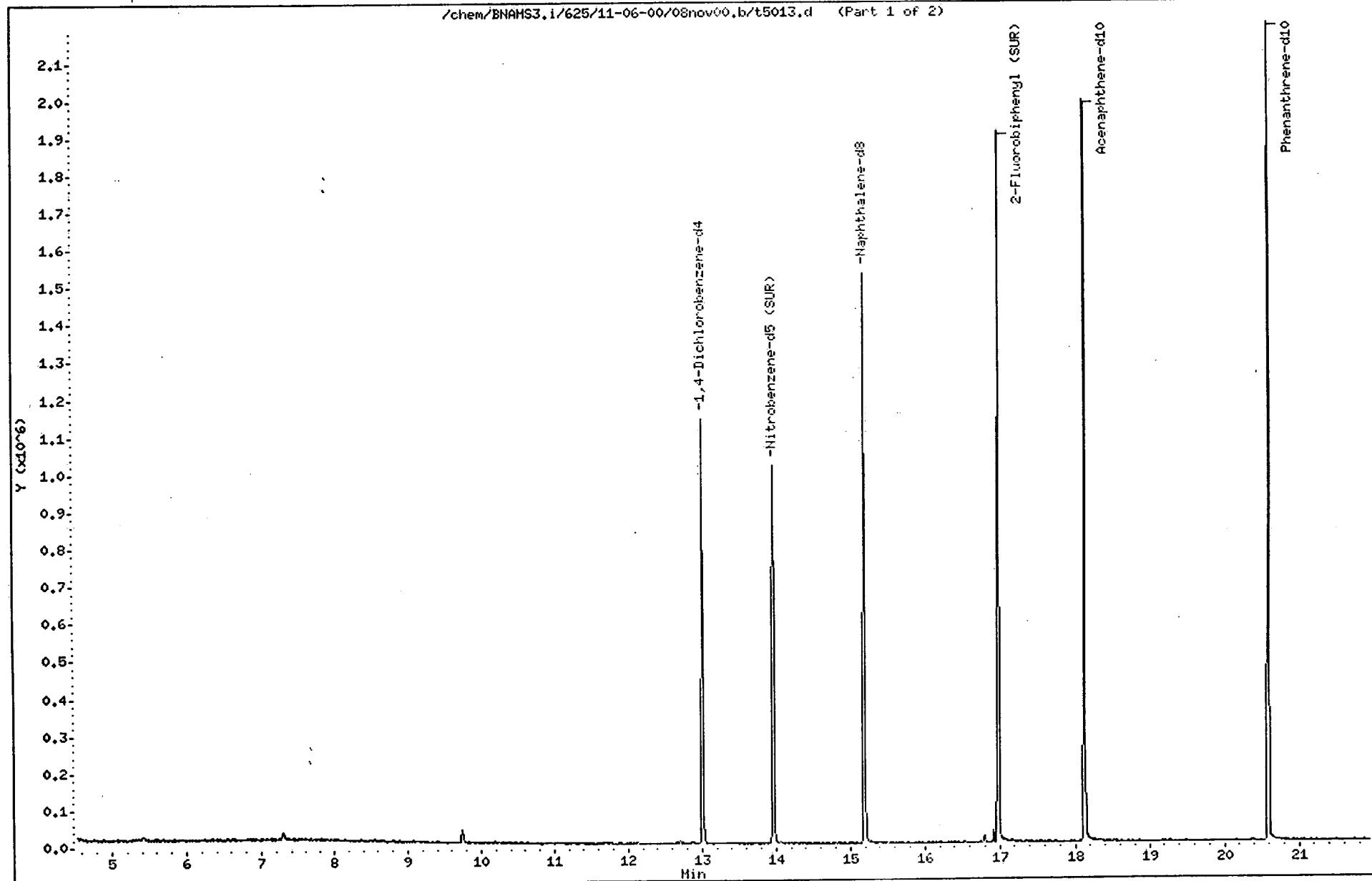
Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5013.d (Part 1 of 2)



Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5013.d

Date : 09-NOV-2000 00:58

Client ID: MW-21

Sample Info: 238257;990;2;1

Purge Volume: 990.0

Column phase: DB-5

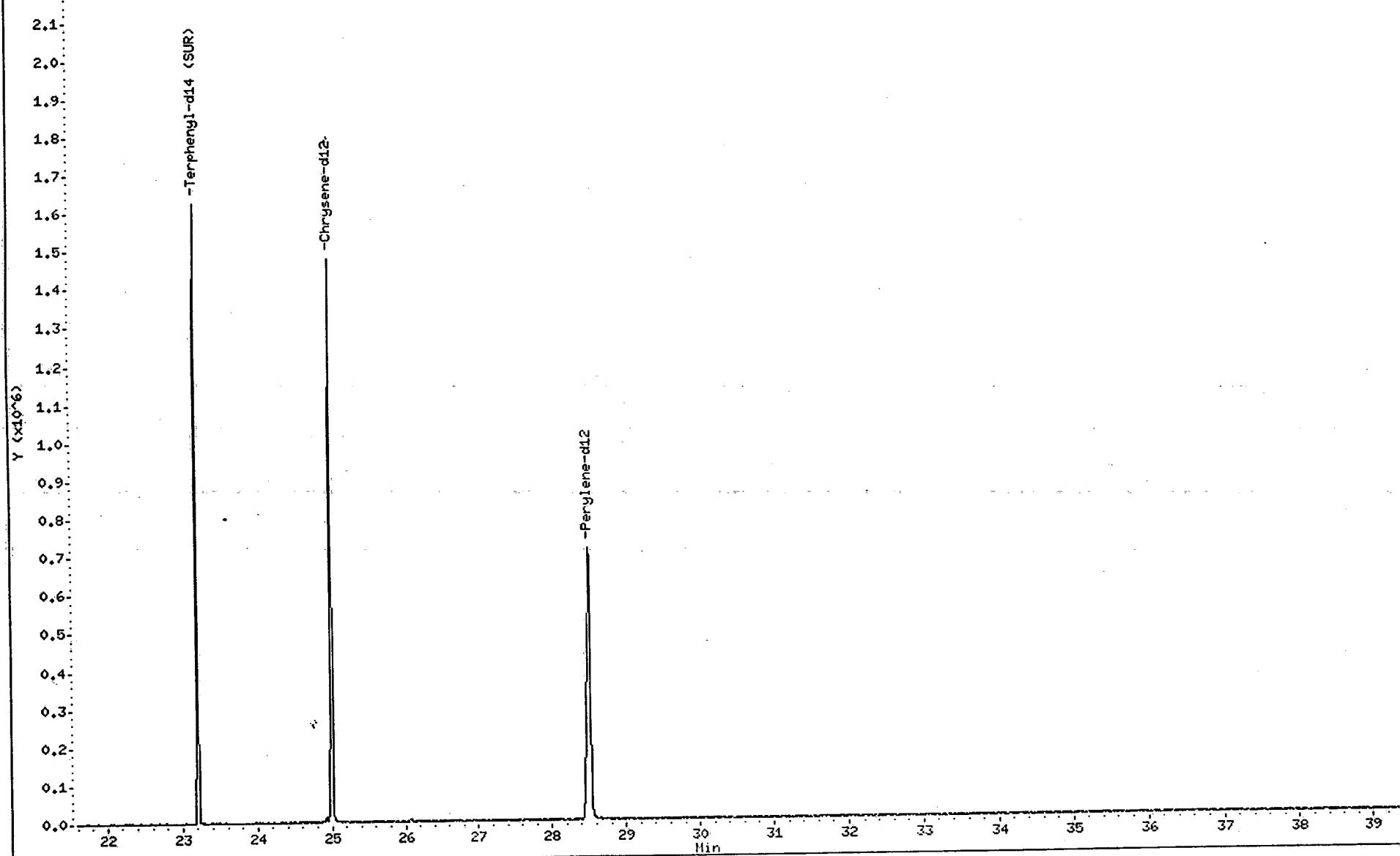
Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

74

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5013.d (Part 2 of 2)



Client ID: **Field\_Blank**  
Site: L.E. Carpenter

Lab Sample No: **238259**  
Lab Job No: **F165**

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Extracted: 11/04/00  
Date Analyzed: 11/09/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t5014.d

Matrix: WATER  
Level: LOW  
Sample Volume: 990 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

**SEMI-VOLATILE ORGANICS - GC/MS**  
**METHOD 625**

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units:</u> ug/l	<u>Units:</u> ug/l
bis(2-Ethylhexyl)phthalate	ND	2.0

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5014.d  
Report Date: 09-Nov-2000 09:26

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5014.d  
Lab Smp Id: 238259 Client Smp ID: Field\_Blank  
Inj Date : 09-NOV-2000 01:46  
Operator : BNAMS 3 Inst ID: BNAMS3.i  
Smp Info : 238259;990;2;1  
Misc Info : F165;PPBN;5915;143  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/08nov00.b/BNA625b.m  
Meth Date : 08-Nov-2000 09:11 emmylou Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 22  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50 Compound Sublist: Bis2phb.sub  
Processing Host: hpdl

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	990.00000	Volume of sample extracted (mL)

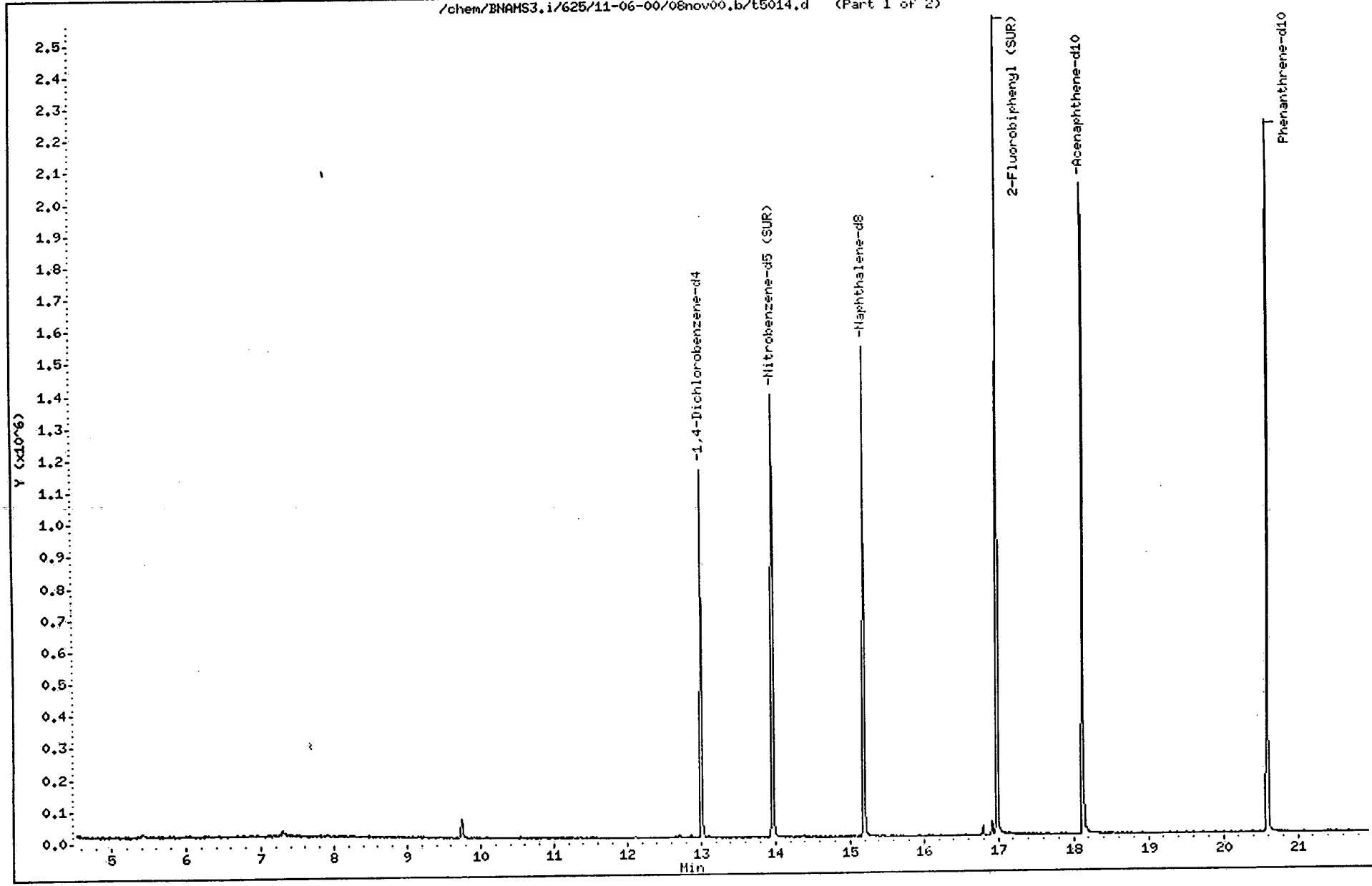
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/ml)	FINAL ( ug/L)
* 79 1,4-Dichlorobenzene-d4		152	13.084	13.019	1.000	230395	40.0000	
\$ 76 Nitrobenzene-d5 (SUR)		82	13.970	13.993	0.991	696877	55.3519	110
* 80 Naphthalene-d8		136	15.193	15.212	1.000	811921	40.0000	
\$ 77 2-Fluorobiphenyl (SUR)		172	16.986	17.003	0.997	960310	46.4488	94
* 82 Acenaphthene-d10		164	18.123	18.142	1.000	624720	40.0000	
* 83 Phenanthrene-d10		188	20.593	20.613	1.000	1097516	40.0000	
\$ 78 Terphenyl-d14 (SUR)		244	23.214	23.221	0.998	754262	49.9071	100
* 81 Chrysene-d12		240	25.008	25.036	1.000	737348	40.0000	
* 84 Perylene-d12		264	28.510	28.547	1.000	732900	40.0000	

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5014.d  
Date : 09-NOV-2000 01:46  
Client ID: Field\_Blank  
Sample Info: 238259;990;2;1  
Purge Volume: 990.0  
Column phase: DB-5

Instrument: BNAMS3.i  
Operator: BNAMS 3  
Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5014.d (Part 1 of 2)

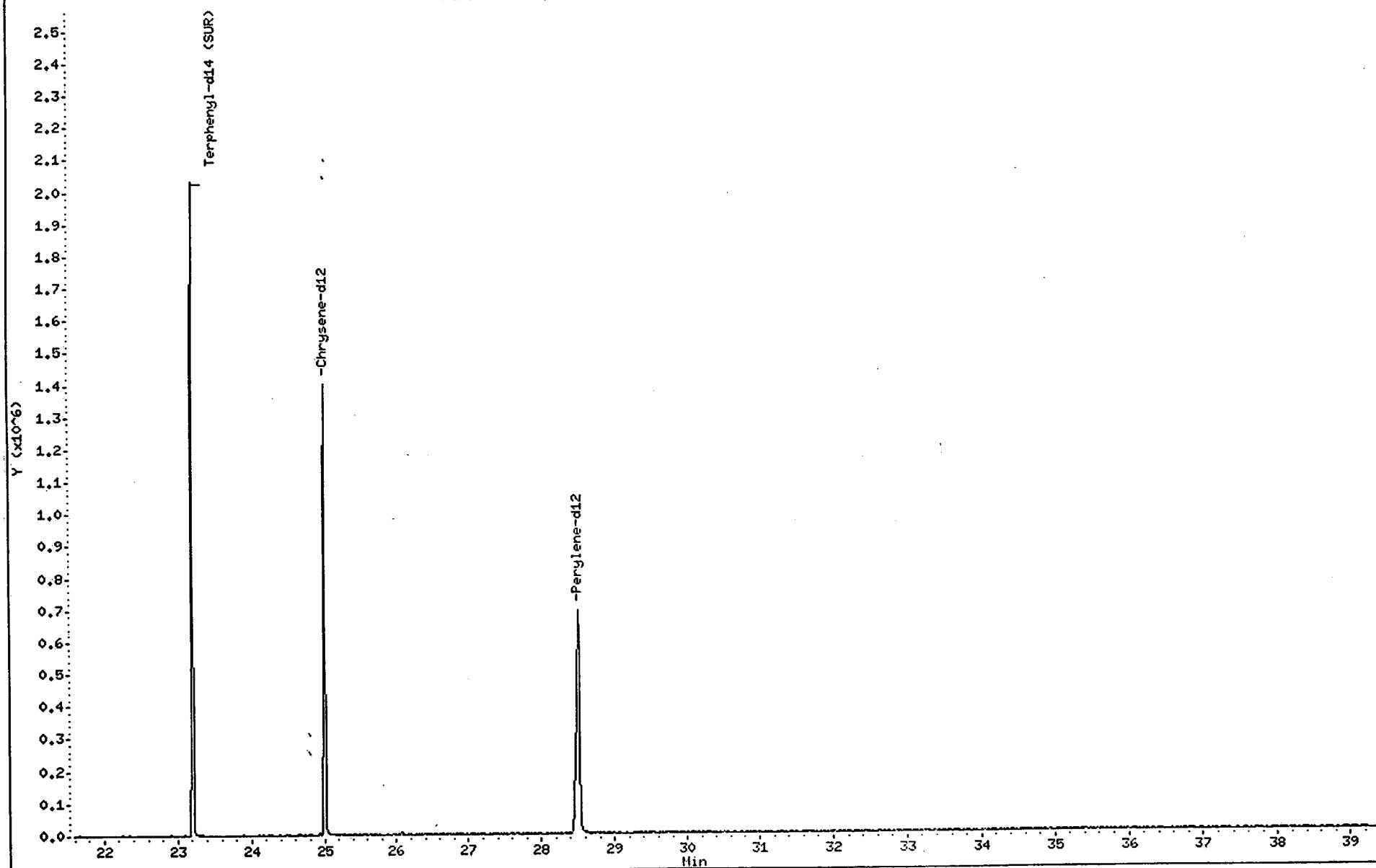


Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t5014.d  
Date : 09-NOV-2000 01:46  
Client ID: Field\_Blank  
Sample Info: 238289;990;2;1  
Purge Volume: 990.0  
Column phase: DB-5

Instrument: BNAMS3.i  
Operator: BNAMS 3  
Column diameter: 0.53

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/chem/BNAMS3.i/625/11-06-00/08nov00.b/t5014.d (Part 2 of 2)



SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab File ID: T4936

DFTPP Injection Date: 11/06/00

Instrument ID: BNAMS3

DFTPP Injection Time: 1035

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	50.5
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	61.5
70	Less than 2.0% of mass 69	0.0 ( 0.0)1
127	40.0 - 60.0% of mass 198	49.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	20.6
365	Greater than 1.0% of mass 198	5.18
441	0.0 - 100.0% of mass 443	8.3 ( 78.7)2
442	40.0 - 110.0% of mass 198	54.6
443	17.0 - 23.0% of mass 442	10.6 ( 19.4)3

1-Value is % mass 69

2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

CLIENT ID	LAB SAMPLE No.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01 TSTD050	TSTD050	T4937	11/06/00	1054
02 TSTD120	TSTD120	T4938	11/06/00	1148
03 TSTD010	TSTD010	T4939	11/06/00	1236
04 TSTD080	TSTD080	T4940	11/06/00	1324
05 TSTD020	TSTD020	T4941	11/06/00	1412
06				
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Data File: /chem/BNAMS3.i/625/11-06-00/06nov00.b/t4936.d

Date : 06-NOV-2000 10:35

Client ID:

Instrument: BNAMS3.i

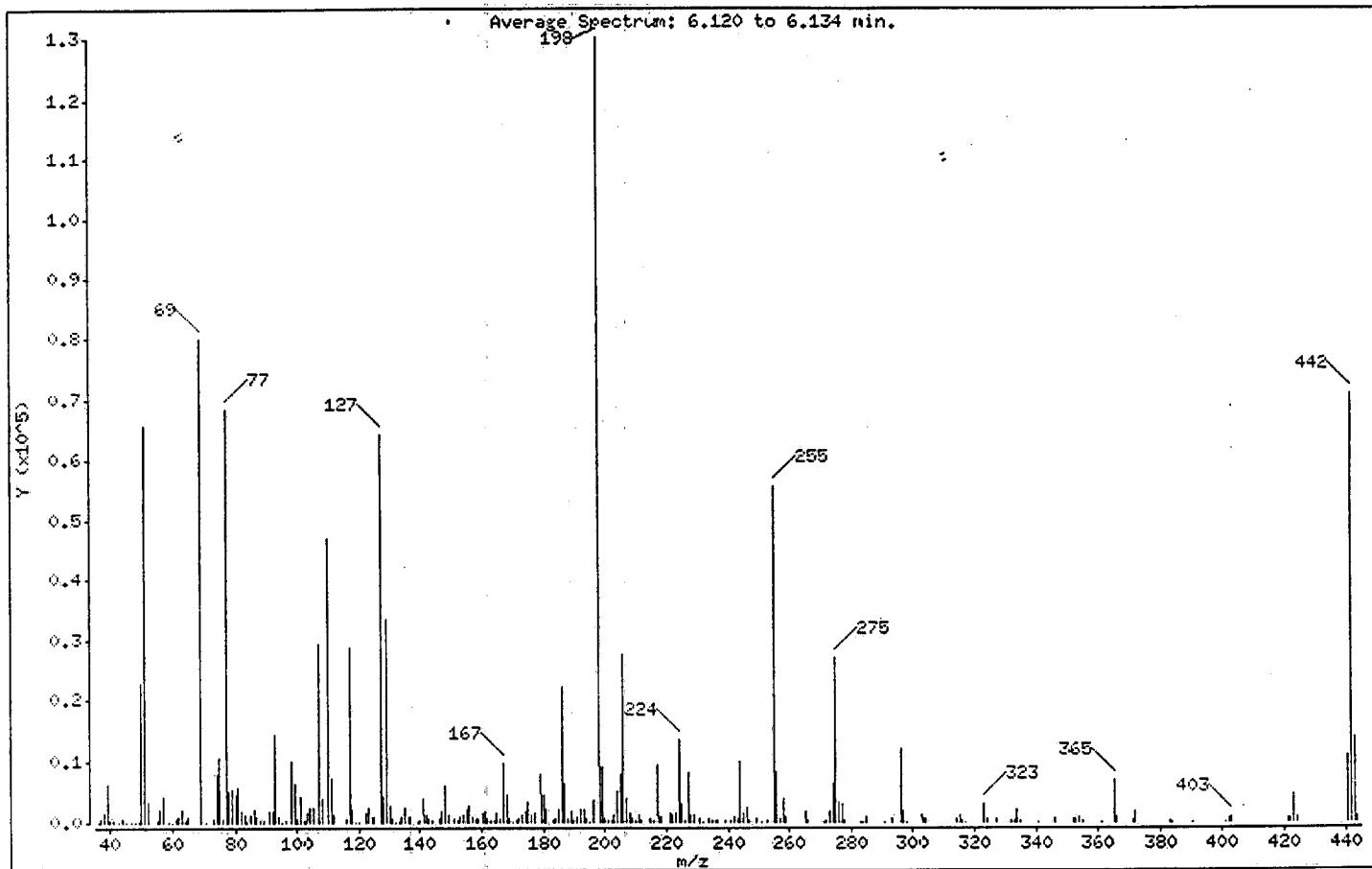
Sample Info: TDFT311

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
1	1	100.00
198	I Base Peak, 100% relative abundance	100.00
51	I 30.00 - 60.00% of mass 198	50.48
68	I Less than 2.00% of mass 69	0.00 < 0.00
69	I Mass 69 relative abundance	61.54
70	I Less than 2.00% of mass 69	0.00 < 0.00
127	I 40.00 - 60.00% of mass 198	49.42
197	I Less than 1.00% of mass 198	0.00
199	I 5.00 - 9.00% of mass 198	6.94
275	I 10.00 - 30.00% of mass 198	20.58
365	I Greater than 1.00% of mass 198	5.18
441	I 0.01 - 100.00% of mass 443	8.35 < 78.75
442	I 40.00 - 110.00% of mass 198	54.59
443	I 17.00 - 23.00% of mass 442	10.60 < 19.42

Data File: /chem/BNAMS3.i/625/11-06-00/06nov00.b/t4936.d

Date : 06-NOW-2000 10:35

Client ID:

Instrument: BNAMS3.i

Sample Info: TDFT311

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25

Data File: t4936.d

Spectrum: Average Spectrum: 6.120 to 6.134 min.

Location of Maximum: 198.00

Number of points: 242

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	124   112.00	1124   183.00	357   257.00	513			
37.00	552   116.00	664   184.00	472   258.00	3920			
38.00	1422   117.00	28584   185.00	2141   259.00	789			
39.00	6220   118.00	2094   186.00	22136   265.00	1872			
40.00	196   119.00	128   187.00	6403   266.00	179			
41.00	374   120.00	144   188.00	605   271.00	102			
43.00	127   122.00	1500   189.00	1888   272.00	182			
44.00	507   123.00	2343   190.00	401   273.00	1891			
45.00	115   124.00	967   191.00	772   274.00	6298			
47.00	129   125.00	748   192.00	2043   275.00	26760			
48.00	112   127.00	64272   193.00	2041   276.00	3355			
49.00	108   128.00	4040   194.00	595   277.00	2970			
50.00	22656   129.00	33616   195.00	146   278.00	300			
51.00	65648   130.00	2705   196.00	3592   283.00	132			
52.00	3213   131.00	475   198.00	130056   284.00	130			
55.00	340   132.00	100   199.00	9021   285.00	770			
56.00	2055   133.00	134   200.00	688   291.00	110			
57.00	4140   134.00	923   201.00	435   293.00	658			
59.00	101   135.00	2431   202.00	169   296.00	12100			
61.00	667   136.00	985   203.00	1181   297.00	1805			
62.00	1010   137.00	997   204.00	5038   298.00	120			
63.00	2036   139.00	122   205.00	7855   303.00	1069			
64.00	244   140.00	301   206.00	27464   304.00	458			
65.00	915   141.00	3763   207.00	3910   314.00	608			
69.00	80040   142.00	1213   208.00	1373   315.00	1137			
71.00	101   143.00	726   209.00	501   316.00	213			
73.00	696   144.00	326   210.00	313   317.00	132			
74.00	7716   146.00	625   211.00	1148   323.00	2944			
75.00	10559   147.00	1935   212.00	155   324.00	475			
76.00	486   148.00	5858   215.00	514   327.00	572			
77.00	68592   149.00	1080   216.00	439   332.00	175			
78.00	5138   151.00	553   217.00	9317   333.00	288			
79.00	5281   152.00	366   218.00	900   334.00	2036			
80.00	4449   153.00	977   221.00	1639   335.00	364			
81.00	5699   154.00	1051   222.00	1226   341.00	111			

Data File: /chem/BNAMS3.i/625/11-06-00/06nov00.b/t4936.d

Date : 06-NOV-2000 10:35

Client ID:

Instrument: BNAMS3.i

Sample Info: TDFT311

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25

Data File: t4936.d

Spectrum: Average Spectrum: 6.120 to 6.134 min.

Location of Maximum: 198.00

Number of points: 242

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	1704   155.00	2122   223.00	1617   346.00	697			
83.00	1324   156.00	2686   224.00	1358   352.00	731			
84.00	140   157.00	897   225.00	3101   353.00	673			
85.00	1149   158.00	719   226.00	290   354.00	763			
86.00	1972   159.00	515   227.00	8004   355.00	153			
87.00	795   160.00	1360   228.00	1316   361.00	104			
88.00	337   161.00	1702   229.00	1224   365.00	6733			
89.00	207   162.00	613   231.00	488   366.00	947			
91.00	1750   163.00	231   232.00	103   371.00	162			
92.00	1728   164.00	158   234.00	729   372.00	1792			
93.00	14493   165.00	1577   235.00	366   383.00	445			
94.00	973   166.00	577   236.00	294   384.00	114			
95.00	124   167.00	9491   237.00	406   390.00	132			
96.00	394   168.00	4394   239.00	173   401.00	106			
98.00	9988   169.00	613   241.00	243   402.00	499			
99.00	6300   170.00	138   242.00	922   403.00	753			
100.00	658   171.00	358   243.00	665   421.00	659			
101.00	4282   172.00	622   244.00	10009   422.00	487			
102.00	174   173.00	1100   245.00	1379   423.00	4535			
103.00	1470   174.00	1907   246.00	2323   424.00	930			
104.00	2353   175.00	3239   247.00	397   441.00	10855			
105.00	2304   176.00	1136   249.00	473   442.00	70992			
107.00	29280   177.00	1516   251.00	124   443.00	13785			
108.00	3822   179.00	7718   253.00	365   444.00	918			
110.00	47000   180.00	4615   255.00	55696				
111.00	7274   181.00	2115   256.00	8025				

Data File: /chem/BNAHS3.1/625/11-06-00/06nov00.b/t4936.d

Date : 06-NOV-2000 10:35

Client ID:

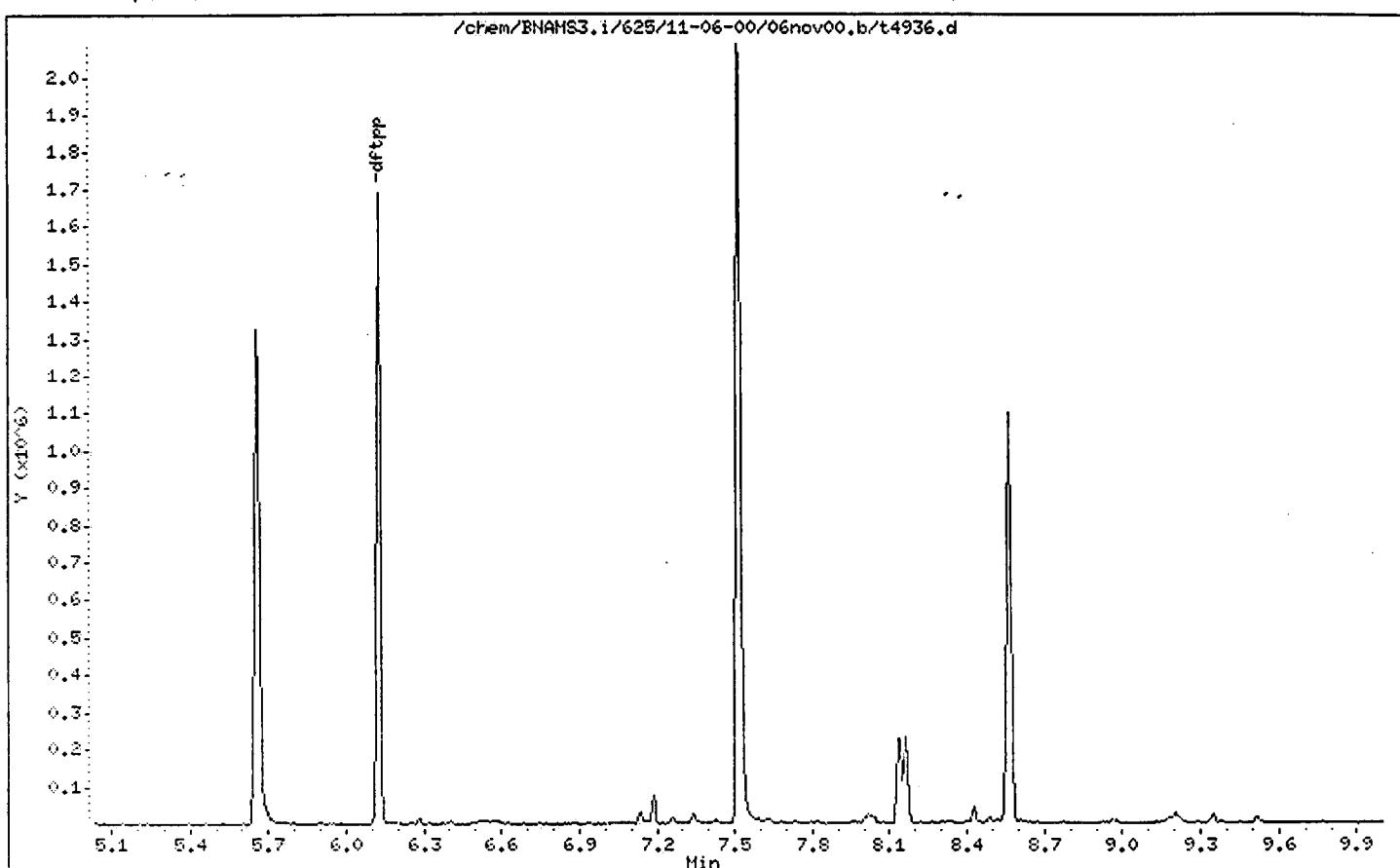
Instrument: BNAHS3.i

Sample Info: TDFT311

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25



SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab File ID: T4964

DFTPP Injection Date: 11/07/00

Instrument ID: BNAMS3

DFTPP Injection Time: 0837

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	53.6
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	62.0
70	Less than 2.0% of mass 69	0.2 ( 0.3)1
127	40.0 - 60.0% of mass 198	49.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	17.8
365	Greater than 1.0% of mass 198	4.98
441	0.0 - 100.0% of mass 443	8.0 ( 78.5)2
442	40.0 - 110.0% of mass 198	53.8
443	17.0 - 23.0% of mass 442	10.2 ( 18.9)3

1-Value is % mass 69

2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

CLIENT ID	LAB SAMPLE No.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01 TSTD312	TSTD312	T4965	11/07/00	0907
C2 WB309	WB309	T4969	11/07/00	1220
03				
04				
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Data File: /chem/BNAMS3.i/625/11-06-00/07nov00.b/t4964.d

Date : 07-NOV-2000 08:37

Client ID:

Instrument: BNAMS3.i

Sample Info: TDFT312

Operator: BNA3

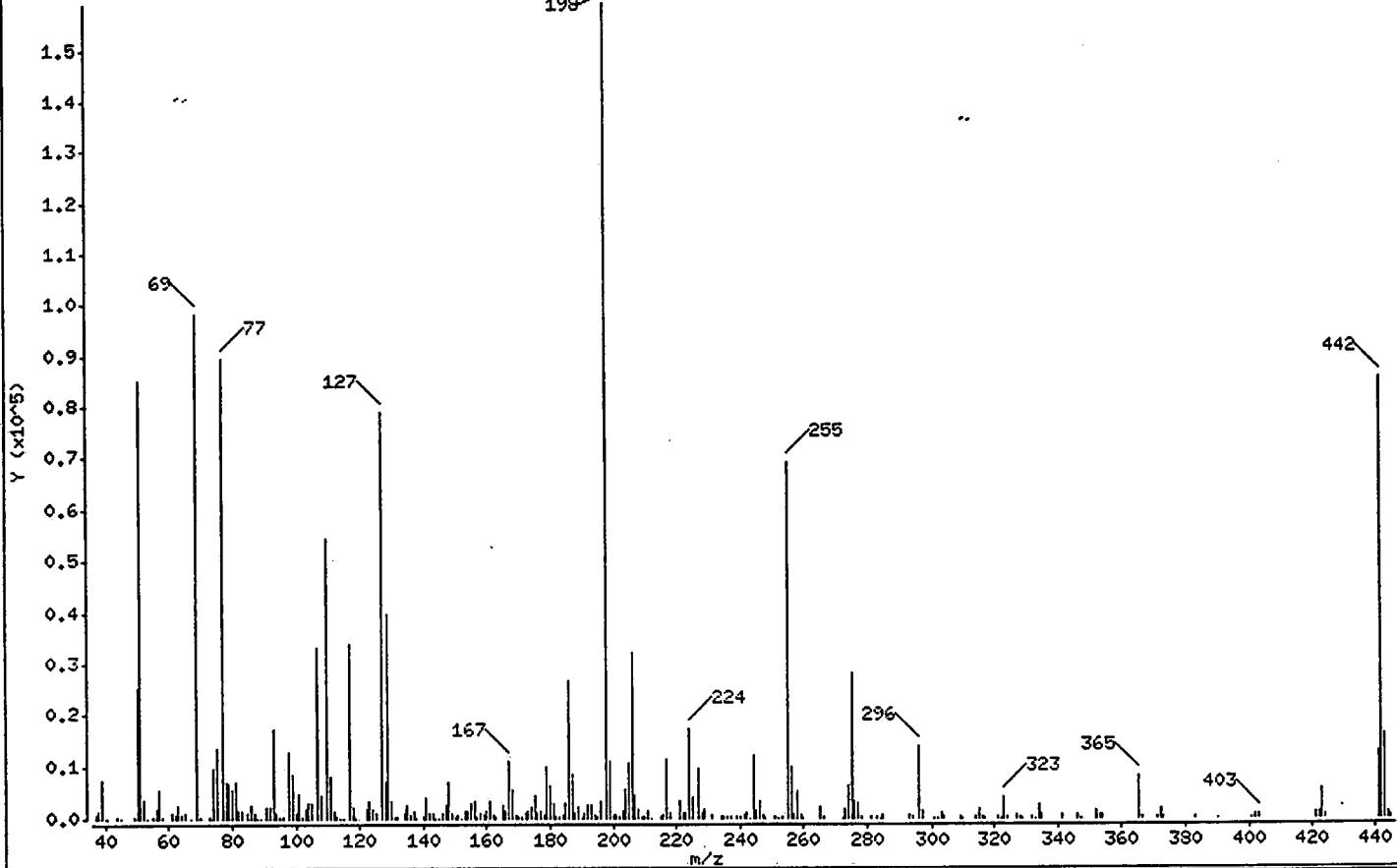
Column phase: DB-5

Column diameter: 0.25

1 dftpp

Average Spectrum: 6.114 to 6.127 min.

198



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
		ABUNDANCE	
198	Base Peak, 100% relative abundance	100.00	
51	30.00 - 60.00% of mass 198	53.59	
68	Less than 2.00% of mass 69	0.00 (< 0.00)	
69	Mass 69 relative abundance	61.97	
70	Less than 2.00% of mass 69	0.21 (< 0.34)	
127	40.00 - 60.00% of mass 198	49.68	
197	Less than 1.00% of mass 198	0.00	
199	5.00 - 9.00% of mass 198	7.02	
275	10.00 - 30.00% of mass 198	17.85	
365	Greater than 1.00% of mass 198	4.98	
441	0.01 - 100.00% of mass 443	7.99 (< 78.47)	
442	40.00 - 110.00% of mass 198	53.83	
443	17.00 - 23.00% of mass 442	10.18 (< 18.92)	

Data File: /chem/BNAMS3.i/625/11-06-00/07nov00.b/t4964.d

Date : 07-NOV-2000 08:37

Client ID:

Instrument: BNAMS3.i

Sample Info: TDFT312

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25

Data File: t4964.d

Spectrum: Average Spectrum: 6.114 to 6.127 min.

Location of Maximum: 198.00

Number of points: 249

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	673   119.00	118   188.00	1103   273.00	1688			
38.00	1330   122.00	2009   189.00	2303   274.00	6309			
39.00	7367   123.00	3453   190.00	155   275.00	28304			
40.00	111   124.00	1896   191.00	1013   276.00	3136			
41.00	130   125.00	1212   192.00	2686   277.00	3082			
44.00	444   127.00	78300   193.00	2578   278.00	463			
45.00	135   128.00	6881   194.00	599   281.00	213			
49.00	431   129.00	39808   195.00	190   283.00	362			
50.00	25176   130.00	3331   196.00	3319   284.00	154			
51.00	85000   131.00	310   198.00	158592   285.00	642			
52.00	3532   132.00	374   199.00	11137   293.00	695			
53.00	138   134.00	1081   200.00	865   294.00	289			
55.00	532   135.00	2453   201.00	573   296.00	13994			
56.00	1798   136.00	862   202.00	216   297.00	1597			
57.00	5305   137.00	1449   203.00	1511   301.00	115			
58.00	281   138.00	128   204.00	5442   302.00	100			
61.00	992   140.00	243   205.00	10573   303.00	1140			
62.00	868   141.00	4091   206.00	32120   304.00	438			
63.00	2661   142.00	1215   207.00	4320   309.00	224			
64.00	722   143.00	978   208.00	1667   310.00	145			
65.00	1204   144.00	125   209.00	451   314.00	442			
67.00	133   145.00	159   210.00	445   315.00	1879			
69.00	98296   146.00	957   211.00	1510   316.00	493			
70.00	338   147.00	2649   212.00	109   317.00	109			
73.00	395   148.00	6793   215.00	468   321.00	415			
74.00	9484   149.00	1243   216.00	611   322.00	106			
75.00	13462   150.00	447   217.00	11332   323.00	4171			
77.00	89496   151.00	592   218.00	1249   324.00	277			
78.00	6825   152.00	130   221.00	3415   327.00	873			
79.00	6511   153.00	1505   222.00	1069   328.00	275			
80.00	5477   154.00	1403   223.00	1262   329.00	137			
81.00	6865   155.00	2924   224.00	17200   332.00	276			
82.00	1577   156.00	3196   225.00	3985   333.00	117			
83.00	1576   157.00	369   227.00	9341   334.00	2543			
85.00	1070   158.00	942   228.00	1187   335.00	567			

Data File: /chem/BNAMS3.i/625/11-06-00/07nov00.b/t4964.d

Date : 07-NOV-2000 08:37

Client ID:

Instrument: BNAMS3.i

Sample Info: TDFT312

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25

Data File: t4964.d

Spectrum: Average Spectrum: 6.114 to 6.127 min.

Location of Maximum: 198.00

Number of points: 249

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	2468   159.00	816   229.00	1649   341.00	568			
87.00	933   160.00	1528   231.00	644   346.00	809			
88.00	150   161.00	3111   234.00	483   347.00	136			
89.00	126   162.00	718   235.00	477   352.00	1417			
91.00	2165   163.00	242   236.00	367   353.00	846			
92.00	2199   165.00	2622   237.00	497   354.00	835			
93.00	17248   166.00	1643   239.00	413   365.00	7892			
94.00	1165   167.00	11110   240.00	307   366.00	518			
95.00	371   168.00	5544   241.00	837   371.00	390			
96.00	403   169.00	561   242.00	947   372.00	1923			
98.00	12342   170.00	237   243.00	168   373.00	356			
99.00	8471   171.00	504   244.00	12086   383.00	539			
100.00	1027   172.00	1255   245.00	1590   390.00	169			
101.00	4653   173.00	1607   246.00	3156   401.00	156			
102.00	258   174.00	2371   247.00	686   402.00	723			
103.00	1795   175.00	4564   248.00	113   403.00	907			
104.00	3080   176.00	1149   251.00	226   421.00	1035			
105.00	2876   177.00	1599   252.00	107   422.00	992			
107.00	33072   178.00	661   253.00	342   423.00	5450			
108.00	4284   179.00	9747   255.00	69216   424.00	900			
110.00	54280   180.00	6040   256.00	9699   441.00	12673			
111.00	8211   181.00	2827   257.00	770   442.00	85384			
112.00	1323   182.00	538   258.00	5252   443.00	16151			
113.00	279   183.00	497   259.00	727   444.00	1143			
114.00	145   184.00	649   260.00	101   445.00	194			
115.00	113   185.00	2874   265.00	2333				
117.00	33832   186.00	26560   266.00	259				
118.00	2093   187.00	8247   272.00	173				

Data File: /chem/BNAMS3.i/625/11-06-00/07nov00.b/t4964.d

Date : 07-NOV-2000 08:37

Client ID:

Instrument: BNAMS3.i

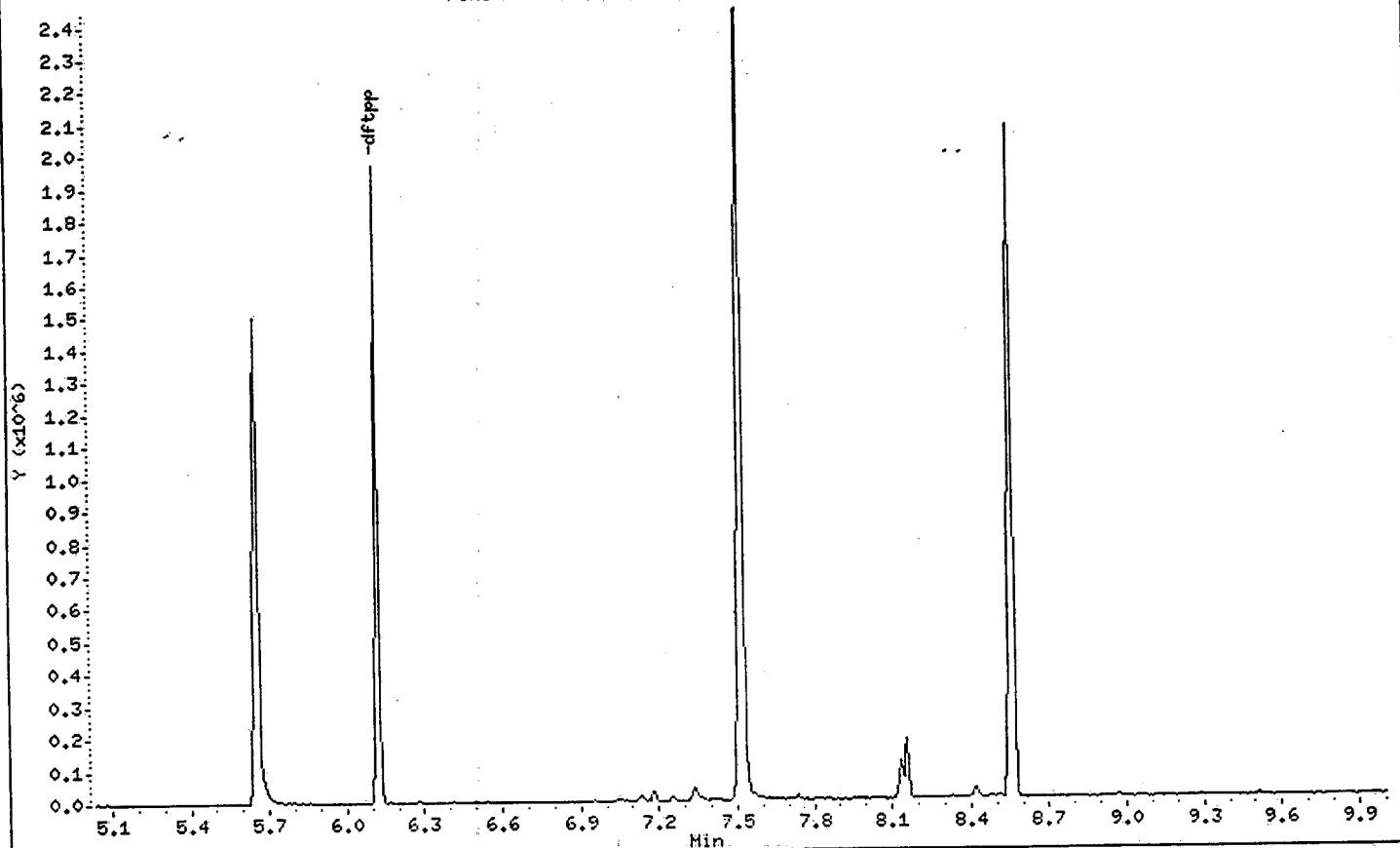
Sample Info: TDFT312

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25

/chem/BNAMS3.i/625/11-06-00/07nov00.b/t4964.d



SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab File ID: T4992

DFTPP Injection Date: 11/08/00

Instrument ID: BNAMS3

DFTPP Injection Time: 0800

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.3
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	63.4
70	Less than 2.0% of mass 69	0.2 ( 0.3)1
127	40.0 - 60.0% of mass 198	47.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.2
275	10.0 - 30.0% of mass 198	19.8
365	Greater than 1.0% of mass 198	5.98
441	0.0 - 100.0% of mass 443	10.1 ( 86.3)2
442	40.0 - 110.0% of mass 198	61.9
443	17.0 - 23.0% of mass 442	11.8 ( 19.0)3

1-Value is % mass 69

2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

CLIENT ID	LAB SAMPLE No.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01 TSTD313	TSTD313	T4993	11/08/00	0826
02 MW-15S	238249	T5005	11/08/00	1833
03 MW-15I	238250	T5006	11/08/00	1921
04 MW-11D	238251	T5007	11/08/00	2009
05 MW-4	238252	T5008	11/08/00	2058
06 MW-17S	238253	T5009	11/08/00	2146
07 MW-14I	238256	T5012	11/09/00	0010
08 MW-21	238257	T5013	11/09/00	0058
09 FIELD_BLANK	238259	T5014	11/09/00	0146
10				
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17				
18				

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t4992.d

Date : 08-NOV-2000 08:00

Client ID:

Sample Info: TDFT313

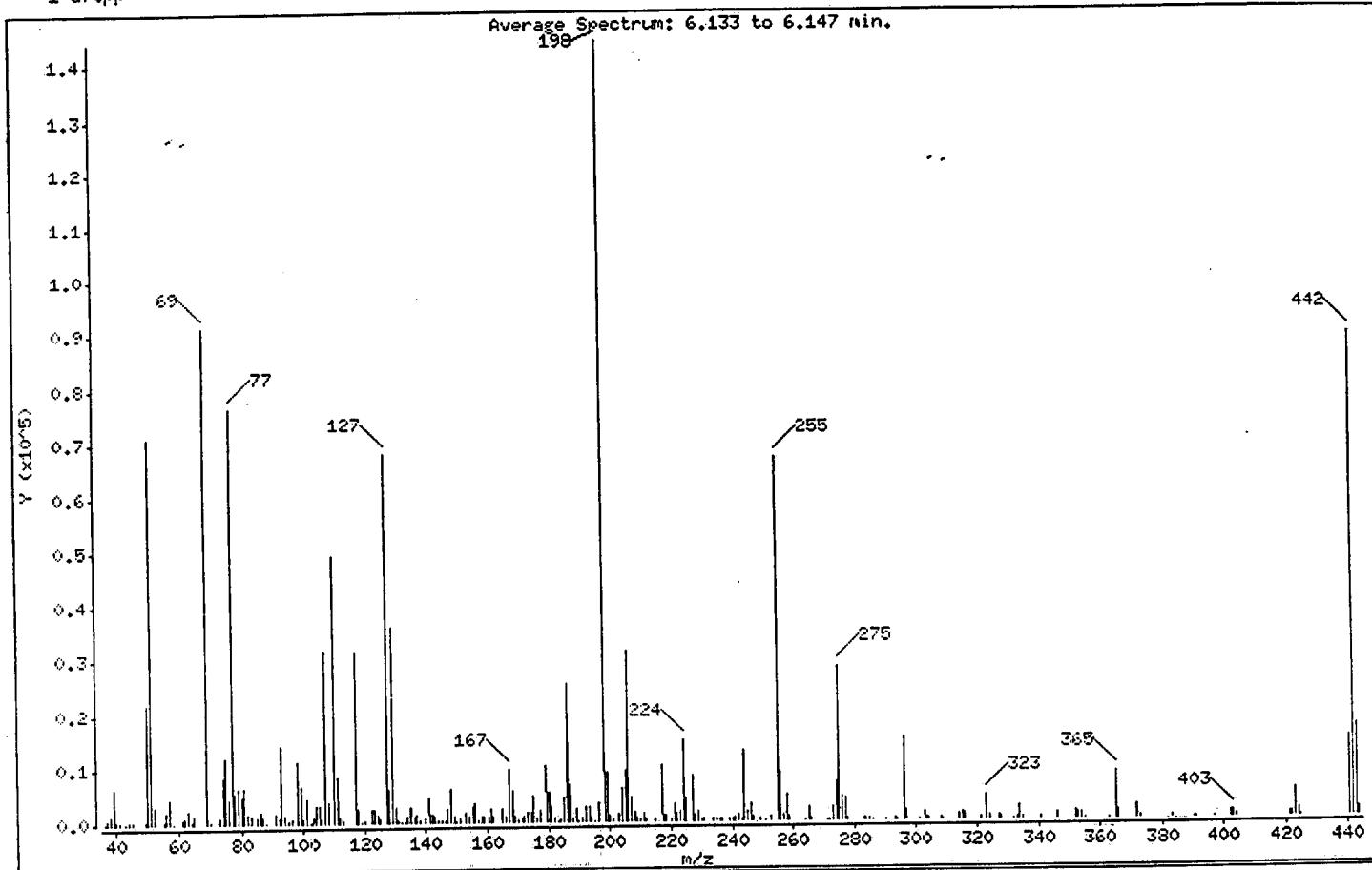
Instrument: BNAMS3.i

Operator: BNAMS3

Column diameter: 0.25

Column phase: DB-5

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	49.26
68	Less than 2.00% of mass 69	0.00 (< 0.00)
69	Mass 69 relative abundance	63.37
70	Less than 2.00% of mass 69	0.19 (< 0.30)
127	40.00 - 60.00% of mass 198	47.19
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.18
275	10.00 - 30.00% of mass 198	19.79
365	Greater than 1.00% of mass 198	5.98
441	0.01 - 100.00% of mass 443	10.14 (< 86.27)
442	40.00 - 110.00% of mass 198	61.87
443	17.00 - 23.00% of mass 442	11.75 (< 18.99)

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t4992.d

Date : 08-NOV-2000 08:00

Instrument: BNAMS3.i

Client ID:

Sample Info: TIDFT313

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25

Data File: t4992.d

Spectrum: Average Spectrum: 6.133 to 6.147 min.

Location of Maximum: 198.00

Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	118	119.00	130	188.00	604	272.00	124
37.00	550	120.00	289	189.00	2186	273.00	2426
38.00	1300	122.00	2175	190.00	126	274.00	6839
39.00	6335	123.00	2416	191.00	782	275.00	28528
40.00	299	124.00	1182	192.00	2742	276.00	4180
41.00	251	125.00	760	193.00	2659	277.00	3954
43.00	111	127.00	68016	194.00	536	278.00	478
44.00	191	128.00	6125	195.00	153	283.00	227
45.00	226	129.00	36240	196.00	3229	284.00	297
49.00	491	130.00	2786	198.00	144128	285.00	325
50.00	21704	131.00	467	199.00	8905	286.00	129
51.00	71000	132.00	125	200.00	880	290.00	110
52.00	3137	133.00	109	201.00	484	293.00	491
55.00	190	134.00	849	203.00	1346	294.00	141
56.00	2103	135.00	2647	204.00	5816	296.00	15234
57.00	4398	136.00	1061	205.00	9299	297.00	1621
58.00	126	137.00	1442	206.00	31536	301.00	152
61.00	552	138.00	198	207.00	4316	303.00	1248
62.00	1058	140.00	503	208.00	1497	304.00	321
63.00	2394	141.00	4265	209.00	675	308.00	223
64.00	269	142.00	1343	210.00	331	309.00	107
65.00	1179	143.00	1013	211.00	1394	314.00	913
69.00	91344	144.00	304	212.00	262	315.00	1451
70.00	273	145.00	200	215.00	379	316.00	970
73.00	873	146.00	226	217.00	10148	321.00	394
74.00	8329	147.00	2200	218.00	1052	323.00	4358
75.00	11913	148.00	5899	220.00	249	324.00	499
76.00	4314	149.00	1156	221.00	2921	327.00	722
77.00	76696	150.00	124	222.00	1336	328.00	294
78.00	5395	151.00	695	223.00	1630	332.00	151
79.00	6244	153.00	1815	224.00	14864	333.00	447
80.00	4501	154.00	1095	225.00	3559	334.00	2262
81.00	6392	155.00	2763	227.00	8296	335.00	452
82.00	1637	156.00	3287	228.00	1068	341.00	457
83.00	1395	157.00	462	229.00	1646	346.00	1098

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t4992.d

Date : 08-NOV-2000 08:00

Client ID:

Instrument: BNAMS3.i

Sample Info: TDFT313

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Data File: t4992.d

Spectrum: Average Spectrum: 6.133 to 6.147 min.

Location of Maximum: 198.00

Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	1045	158.00	971	230.00	283	352.00	1335
86.00	1998	159.00	904	231.00	381	353.00	894
87.00	892	160.00	1114	234.00	351	354.00	898
88.00	118	161.00	2476	235.00	448	355.00	151
91.00	1700	162.00	973	236.00	372	363.00	103
92.00	949	165.00	2262	237.00	364	365.00	8613
93.00	14370	166.00	995	239.00	330	366.00	1224
94.00	1176	167.00	9766	240.00	252	372.00	2224
95.00	354	168.00	5637	241.00	718	373.00	337
96.00	635	169.00	990	242.00	909	383.00	418
98.00	11403	170.00	232	243.00	331	390.00	144
99.00	6652	171.00	646	244.00	12909	391.00	117
100.00	532	172.00	934	245.00	1630	397.00	112
101.00	4226	173.00	1571	246.00	3135	402.00	989
102.00	156	174.00	1813	247.00	566	403.00	1104
103.00	1012	175.00	4696	249.00	267	404.00	254
104.00	2899	176.00	780	251.00	109	421.00	732
105.00	2908	177.00	1680	253.00	736	422.00	574
106.00	659	179.00	10150	255.00	66784	423.00	5118
107.00	31856	180.00	5422	256.00	9098	424.00	1187
108.00	3769	181.00	2626	257.00	847	425.00	102
110.00	49360	182.00	535	258.00	4725	441.00	14611
111.00	8145	183.00	134	259.00	542	442.00	89176
112.00	1071	184.00	391	264.00	111	443.00	16936
113.00	272	185.00	4377	265.00	2289	444.00	1375
117.00	31328	186.00	25560	266.00	243		
118.00	2170	187.00	6745	271.00	109		

Data File: /chem/BNAMS3.i/625/11-06-00/08nov00.b/t4992.d

Date : 08-NOV-2000 08:00

Client ID:

Instrument: INAMS3.i

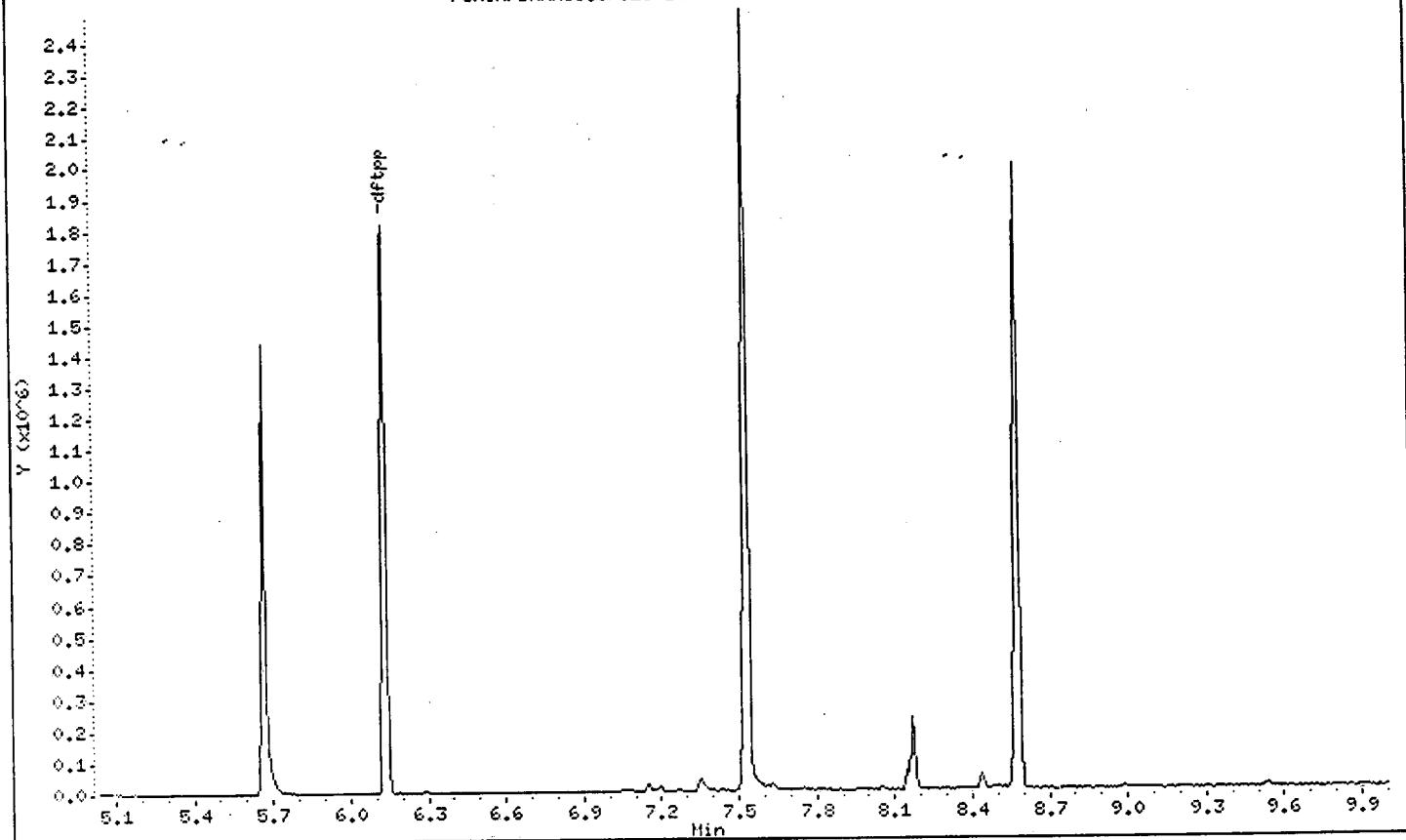
Sample Info: TDFT313

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25

/chem/BNAMS3.i/625/11-06-00/08nov00.b/t4992.d



SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab File ID: T5020

DFTPP Injection Date: 11/09/00

Instrument ID: BNAMS3

DFTPP Injection Time: 0802

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	53.3
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	66.4
70	Less than 2.0% of mass 69	0.1 ( 0.2)1
127	40.0 - 60.0% of mass 198	52.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	21.5
365	Greater than 1.0% of mass 198	5.84
441	0.0 - 100.0% of mass 443	8.6 ( 75.5)2
442	40.0 - 110.0% of mass 198	55.8
443	17.0 - 23.0% of mass 442	11.3 ( 20.3)3

1-Value is % mass 69

2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

CLIENT ID	LAB SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01 TSTD314	TSTD314	T5021	11/09/00	0845
02 MW-25R	238255	T5026	11/09/00	1249
03 MW-22R	238254	T5027	11/09/00	1337
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				

Data File: /chem/BNAES3.i/625/11-06-00/09nov00.b/t5020.d

Date : 09-NOV-2000 08:02

Client ID:

Instrument: BNAES3.i

Sample Info: TDFT314

Operator: BNA3

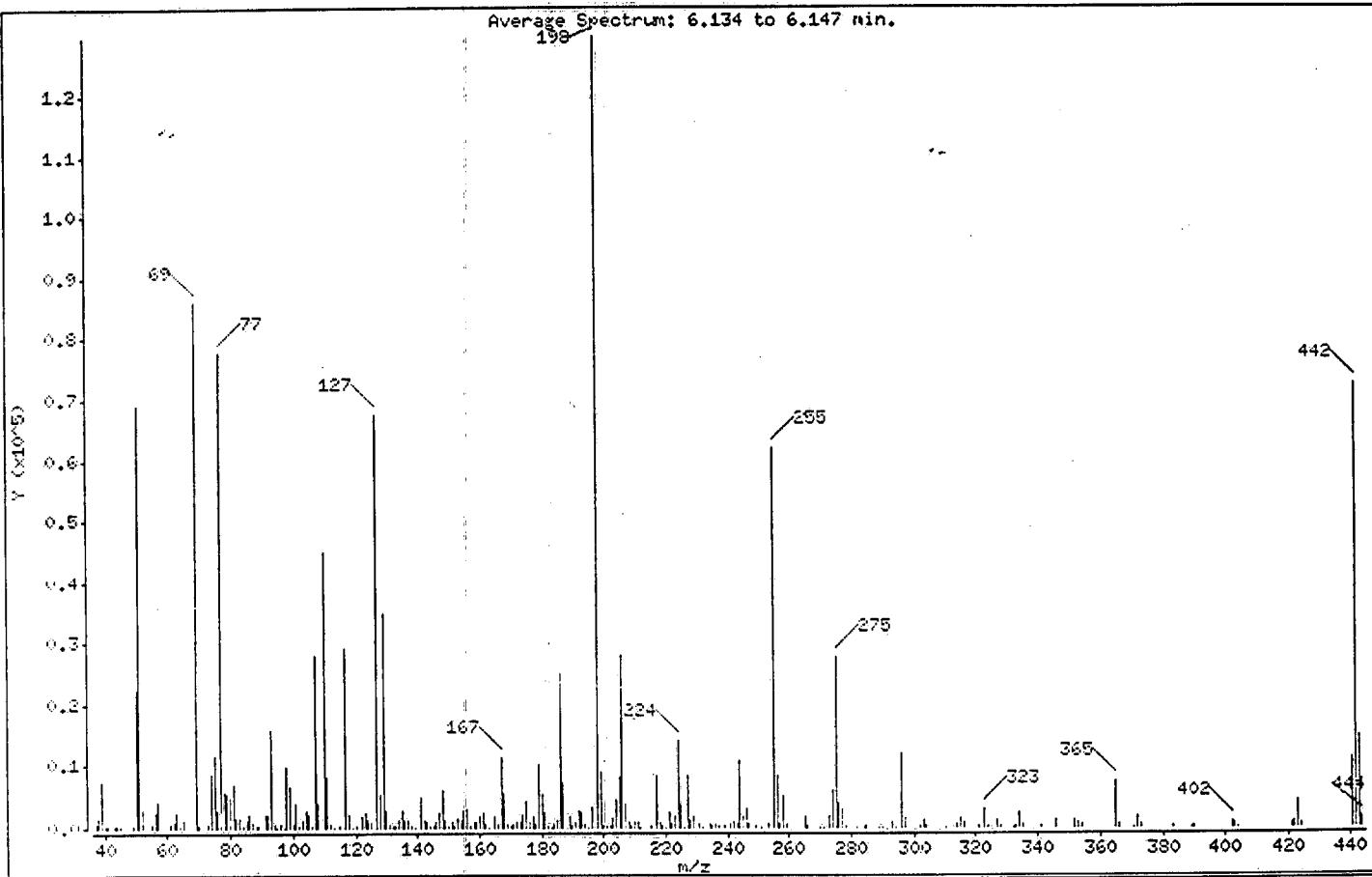
Column phase: DB-5

Column diameter: 0.25

1 dftpp

Average Spectrum: 6.134 to 6.147 min.

198



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
1	1	1
198	I Base Peak, 100% relative abundance	100.00
51	I 30.00 - 60.00% of mass 198	53.30
69	I Less than 2.00% of mass 69	0.00 (< 0.00)
69	I Mass 69 relative abundance	66.38
70	I Less than 2.00% of mass 69	0.14 (< 0.21)
127	I 40.00 - 60.00% of mass 198	52.14
137	I Less than 1.00% of mass 198	0.00
199	I 5.00 - 9.00% of mass 198	6.95
275	I 10.00 - 30.00% of mass 198	21.47
365	I Greater than 1.00% of mass 198	5.84
441	I 0.01 - 100.00% of mass 443	8.55 (< 75.46)
442	I 40.00 - 110.00% of mass 198	55.82
443	I 17.00 - 23.00% of mass 442	11.34 (< 20.31)

Data File: /chem/BNAHS3.i/625/11-06-00/09nov00.b/t5020.d

Date : 09-NOV-2000 08:02

Client ID:

Instrument: BNAHS3.i

Sample Info: TDFT314

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25

Data File: t5020.d

Spectrum: Average Spectrum: 6.134 to 6.147 min.

Location of Maximum: 198.00

Number of points: 247

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	702   117.00	29128   183.00	113   259.00	5117			
38.00	1377   118.00	2040   184.00	524   259.00	577			
39.00	7419   119.00	148   185.00	1128   265.00	1785			
40.00	363   120.00	304   186.00	24944   266.00	152			
41.00	276   122.00	1752   187.00	7164   270.00	132			
43.00	299   123.00	2399   189.00	1779   271.00	117			
44.00	238   124.00	1196   190.00	259   273.00	1906			
45.00	313   125.00	971   191.00	1018   274.00	6081			
49.00	159   127.00	67568   192.00	2570   275.00	27316			
50.00	22256   128.00	5399   193.00	2397   276.00	3935			
51.00	69064   129.00	34984   194.00	474   277.00	3017			
52.00	3056   130.00	2724   195.00	144   278.00	299			
55.00	616   131.00	486   196.00	3299   282.00	116			
56.00	2238   132.00	338   198.00	129584   284.00	105			
57.00	4029   133.00	181   199.00	9006   285.00	269			
61.00	708   134.00	1112   200.00	302   289.00	100			
62.00	921   135.00	2668   201.00	150   290.00	112			
63.00	2440   136.00	1061   202.00	358   293.00	840			
64.00	333   137.00	1246   203.00	1404   294.00	103			
65.00	1148   138.00	355   204.00	4607   296.00	11886			
69.00	88016   139.00	127   205.00	8107   297.00	1540			
70.00	177   141.00	4863   206.00	28136   302.00	178			
73.00	619   142.00	1212   207.00	3919   303.00	1279			
74.00	8538   143.00	841   208.00	852   304.00	292			
75.00	11659   144.00	285   209.00	233   310.00	124			
76.00	2671   145.00	220   210.00	762   314.00	571			
77.00	77624   146.00	1028   211.00	1029   315.00	1557			
78.00	5544   147.00	2473   212.00	118   316.00	758			
79.00	5462   148.00	6012   215.00	378   321.00	376			
80.00	4901   149.00	1090   217.00	8489   323.00	3083			
81.00	6837   150.00	172   218.00	950   324.00	251			
82.00	1637   151.00	896   219.00	173   327.00	1122			
83.00	1616   152.00	230   220.00	103   328.00	262			
84.00	184   153.00	1458   221.00	2401   332.00	102			
85.00	1205   154.00	1166   222.00	701   333.00	270			

Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5020.d

Date : 09-NOV-2000 08:02

Instrument: BNAMS3.i

Client ID:

Sample Info: TDFT314

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Data File: t5020.d

Spectrum: Average Spectrum: 6.134 to 6.147 min.

Location of Maximum: 198.00

Number of points: 247

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	2078   155.00	2792   223.00	1822   334.00	2383			
87.00	840   156.00	3068   224.00	14026   335.00	582			
89.00	178   157.00	353   225.00	3546   341.00	406			
89.00	323   158.00	899   226.00	113   346.00	1157			
91.00	2114   159.00	750   227.00	8477   352.00	1193			
92.00	2190   160.00	1669   228.00	1207   353.00	803			
93.00	15685   161.00	2470   229.00	1650   354.00	591			
94.00	552   162.00	652   231.00	506   365.00	7572			
95.00	113   163.00	144   232.00	111   366.00	466			
96.00	589   165.00	1879   234.00	489   371.00	148			
97.00	115   166.00	723   235.00	361   372.00	1685			
98.00	9697   167.00	11276   236.00	625   373.00	511			
99.00	6490   168.00	5216   237.00	299   383.00	379			
100.00	523   169.00	672   239.00	281   389.00	110			
101.00	3796   170.00	403   241.00	552   390.00	270			
102.00	386   171.00	489   242.00	832   402.00	854			
103.00	1171   172.00	1003   243.00	550   403.00	606			
104.00	2807   173.00	1022   244.00	10741   404.00	129			
105.00	2117   174.00	2117   245.00	1680   421.00	692			
106.00	199   175.00	4246   246.00	3033   422.00	857			
107.00	38032   176.00	775   247.00	579   423.00	4263			
108.00	3796   177.00	1753   248.00	399   424.00	725			
110.00	45996   178.00	556   251.00	137   441.00	11085			
111.00	8135   179.00	10051   253.00	577   442.00	72328			
112.00	704   180.00	5340   255.00	61824   443.00	14690			
113.00	105   181.00	2405   256.00	8204   444.00	1380			
115.00	211   182.00	277   257.00	553				

Data File: /chem/BNAMS3.i/625/11-06-00/09nov00.b/t5020.d

Date : 09-NOV-2000 08:02

Client ID:

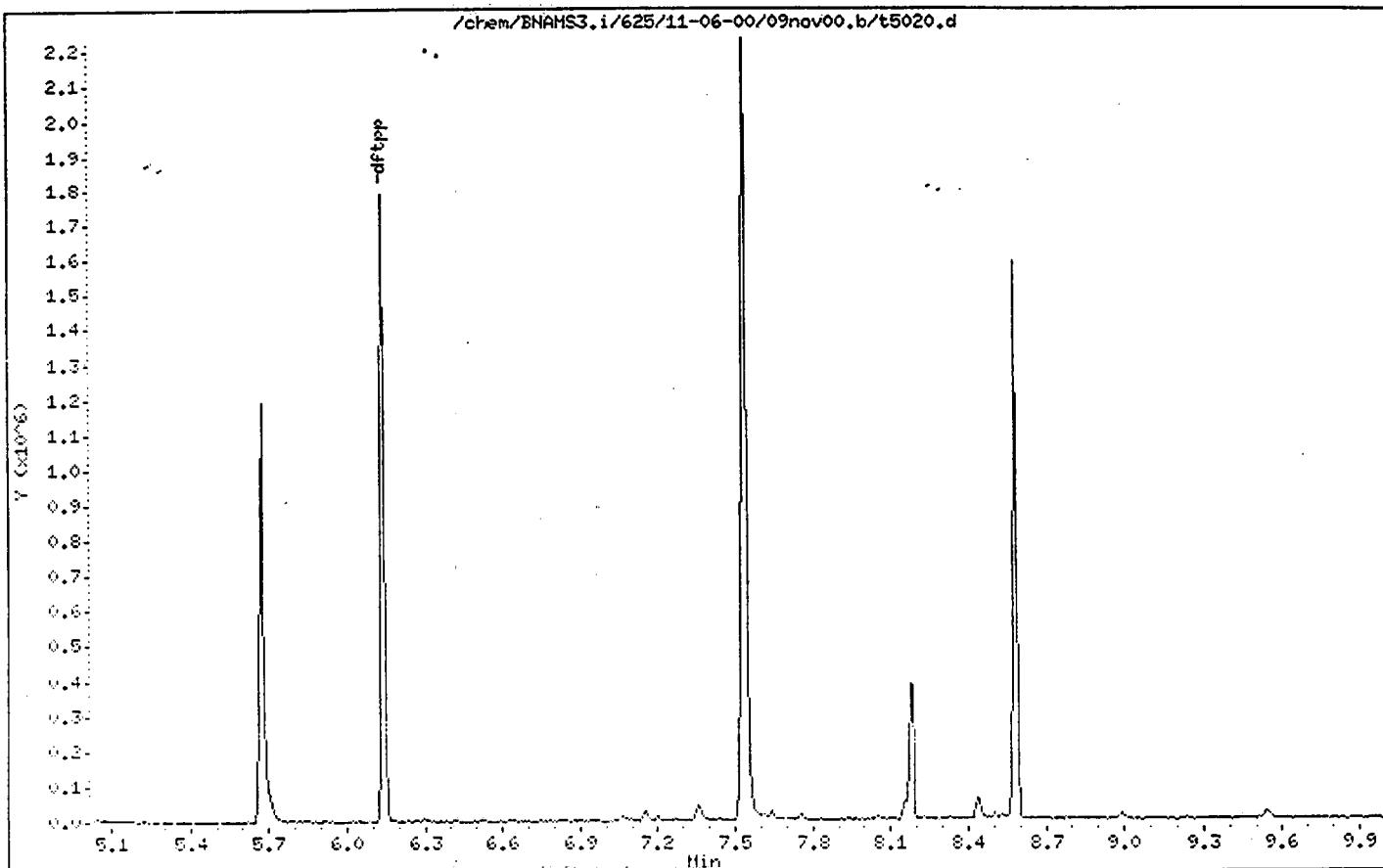
Instrument: BNAMS3.i

Sample Info: TDFT314

Operator: BNA3

Column phase: DB-5

Column diameter: 0.25



## SEMIVOLATILE METHOD BLANK SUMMARY

WB309

Matrix: WATER

Date Analyzed: 11/07/00

Level: LOW

Time Analyzed: 1220

Instrument ID: BNAMS3

Lab File ID: T4969

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	DATE ANALYZED
01	MW-15S	238249	T5005	11/08/00
02	MW-15I	238250	T5006	11/08/00
03	MW-11D	238251	T5007	11/08/00
04	MW-4	238252	T5008	11/08/00
05	MW-17S	238253	T5009	11/08/00
06	MW-14I	238256	T5012	11/09/00
07	MW-21	238257	T5013	11/09/00
08	FIELD BLANK	238259	T5014	11/09/00
09	MW-25R	238255	T5026	11/09/00
10	MW-22R	238254	T5027	11/09/00
11				
12				
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29				
30				

COMMENTS:

Client ID: WB309  
Site:

Lab Sample No: WB309  
Lab Job No: F165

Date Sampled: \_\_\_\_\_  
Date Received: \_\_\_\_\_  
Date Extracted: 11/04/00  
Date Analyzed: 11/07/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t4969.d

Matrix: WATER  
Level: LOW  
Sample Volume: 1000 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection</u> <u>Limit</u> <u>Units: ug/l</u>
Phenol	ND	1.0
2-Chlorophenol	ND	1.9
2-Methylphenol	ND	2.0
4-Methylphenol	ND	1.9
2-Nitrophenol	ND	1.7
2,4-Dimethylphenol	ND	1.3
2,4-Dichlorophenol	ND	1.3
4-Chloro-3-methylphenol	ND	1.9
2,4,6-Trichlorophenol	ND	0.6
2,4,5-Trichlorophenol	ND	0.6
2,4-Dinitrophenol	ND	1.1
4-Nitrophenol	ND	1.0
4,6-Dinitro-2-methylphenol	ND	1.3
Pentachlorophenol	ND	1.6
Benzoic Acid	ND	2.8
N-Nitrosodimethylamine	ND	0.5
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	0.6
1,4-Dichlorobenzene	ND	0.6
1,2-Dichlorobenzene	ND	0.6
bis(2-chloroisopropyl)ether	ND	1.1
N-Nitroso-di-n-propylamine	ND	0.8
Hexachloroethane	ND	0.7
Nitrobenzene	ND	0.8
Isophorone	ND	0.9
bis(2-Chloroethoxy)methane	ND	0.9
1,2,4-Trichlorobenzene	ND	0.6
Naphthalene	ND	0.8
4-Chloroaniline	ND	0.8
Hexachlorobutadiene	ND	0.6
2-Methylnaphthalene	ND	0.6
Hexachlorocyclopentadiene	ND	0.9
2-Chloronaphthalene	ND	0.8
2-Nitroaniline	ND	0.7

Client ID: WB309  
Site:

Lab Sample No: WB309  
Lab Job No: F165

Date Sampled: \_\_\_\_\_  
Date Received: \_\_\_\_\_  
Date Extracted: 11/04/00  
Date Analyzed: 11/07/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t4969.d

Matrix: WATER  
Level: LOW  
Sample Volume: 1000 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection</u> <u>Limit</u> <u>Units: ug/l</u>
Dimethylphthalate	ND	0.5
Acenaphthylene	ND	0.5
2,6-Dinitrotoluene	ND	0.7
3-Nitroaniline	ND	0.4
Acenaphthene	ND	0.6
Dibenzofuran	ND	0.4
2,4-Dinitrotoluene	ND	0.6
Diethylphthalate	ND	0.4
4-Chlorophenyl-phenylether	ND	0.5
Fluorene	ND	0.7
4-Nitroaniline	ND	0.6
N-Nitrosodiphenylamine	ND	0.6
4-Bromophenyl-phenylether	ND	1.2
Hexachlorobenzene	ND	0.6
Phenanthrene	ND	0.5
Anthracene	ND	0.3
Carbazole	ND	0.6
Di-n-butylphthalate	ND	0.5
Fluoranthene	ND	0.5
Pyrene	ND	0.6
Benzidine	ND	13
Butylbenzylphthalate	ND	0.7
3,3'-Dichlorobenzidine	ND	4.7
Benzo(a)anthracene	ND	0.4
Chrysene	ND	0.6
bis(2-Ethylhexyl)phthalate	ND	2.0
Di-n-octylphthalate	ND	0.3
Benzo(b)fluoranthene	ND	0.4
Benzo(k)fluoranthene	ND	0.6
Benzo(a)pyrene	ND	0.2
Indeno(1,2,3-cd)pyrene	ND	0.5
Dibenz(a,h)anthracene	ND	0.3
Benzo(g,h,i)perylene	ND	0.4
Pyridine	ND	0.6

Client ID: WB309  
Site:

Lab Sample No: WB309  
Lab Job No: F165

Date Sampled: \_\_\_\_\_  
Date Received: \_\_\_\_\_  
Date Extracted: 11/04/00  
Date Analyzed: 11/07/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t4969.d

Matrix: WATER  
Level: LOW  
Sample Volume: 1000 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
METHOD 625

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection Limit</u> <u>Units: ug/l</u>
Aniline	ND	1.0
Benzyl Alcohol	ND	0.8
1,2-Diphenylhydrazine	ND	0.5
Diphenyl	ND	0.7
Diphenyl Ether	ND	10
Acetophenone	ND	1.0
N,N-Dimethylaniline	ND	0.7
1,4-Dioxane	ND	0.6
2,3,7,8-TCDD (screen)	ND	1.0
Benzaldehyde	ND	1.8
Caprolactum	ND	0.2
Atrazine	ND	1.0

Client ID: WB309  
Site:

Lab Sample No: WB309  
Lab Job No: F165

Date Sampled: \_\_\_\_\_  
Date Received: \_\_\_\_\_  
Date Extracted: 11/04/00  
Date Analyzed: 11/07/00  
GC Column: DB-5  
Instrument ID: BNAMS3.i  
Lab File ID: t4969.d

Matrix: WATER  
Level: LOW  
Sample Volume: 1000 ml  
Extract Final Volume: 2.0 ml  
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS  
TENTATIVELY IDENTIFIED COMPOUNDS  
METHOD 625

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
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18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
TOTAL ESTIMATED CONCENTRATION		0.0	

Data File: /chem/BNAMS3.i/625/11-06-00/07nov00.b/t4969.d  
Report Date: 07-Nov-2000 15:02

STL Edison

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/625/11-06-00/07nov00.b/t4969.d  
Lab Smp Id: WB309 Client Smp ID: BNA  
Inj Date : 07-NOV-2000 12:20  
Operator : BNAMS 3 Inst ID: BNAMS3.i  
Smp Info : WB309;1000;2;1;  
Misc Info : WB309;BNA;  
Comment :  
Method : /chem/BNAMS3.i/625/11-06-00/07nov00.b/BNA625b.m  
Meth Date : 07-Nov-2000 12:34 emmylou Quant Type: ISTD  
Cal Date : 06-NOV-2000 14:12 Cal File: t4941.d  
Als bottle: 5 QC Sample: BLANK  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: all.sub  
Target Version: 3.50

Concentration Formula: Amt \* DF \* 1000\*Vt/Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/ml)	(ug/L)
\$ 16 2-Fluorophenol (SUR)	112	10.536	10.538	0.810	1	168692	20.2731	40
\$ 17 Phenol-d5 (SUR)	99	12.356	12.335	0.950	1	198021	12.8973	26
* 79 1,4-Dichlorobenzene-d4	152	13.007	13.012	1.000	1	244714	40.0000	
\$ 76 Nitrobenzene-d5 (SUR)	82	13.967	13.932	0.919	1	688266	46.5523	93
* 80 Naphthalene-d8	136	15.196	15.205	1.000	1	953455	40.0000	
\$ 77 2-Fluorobiphenyl (SUR)	172	16.983	16.995	0.937	1	955719	41.6061	83
* 82 Acenaphthene-d10	164	18.127	18.134	1.000	1	694100	40.0000	
\$ 18 2,4,6-Tribromophenol (SUR)	330	19.428	19.447	1.072	1	123890	43.2551	86
* 83 Phenanthrene-d10	188	20.597	20.606	1.000	1	1303094	40.0000	
\$ 78 Terphenyl-d14 (SUR)	244	23.212	23.221	0.928	1	885330	51.0499	100
* 81 Chrysene-d12	240	25.007	25.030	1.000	1	846102	40.0000	
* 84 Perylene-d12	264	28.517	28.544	1.000	1	790475	40.0000	

Data File: /chem/BNAMS3.i/625/11-06-00/07nov00.b/t4969.d

Date : 07-NOV-2000 12:20

Client ID: BNA

Sample Info: WB309;1000;2;1;

Purge Volume: 1000.0

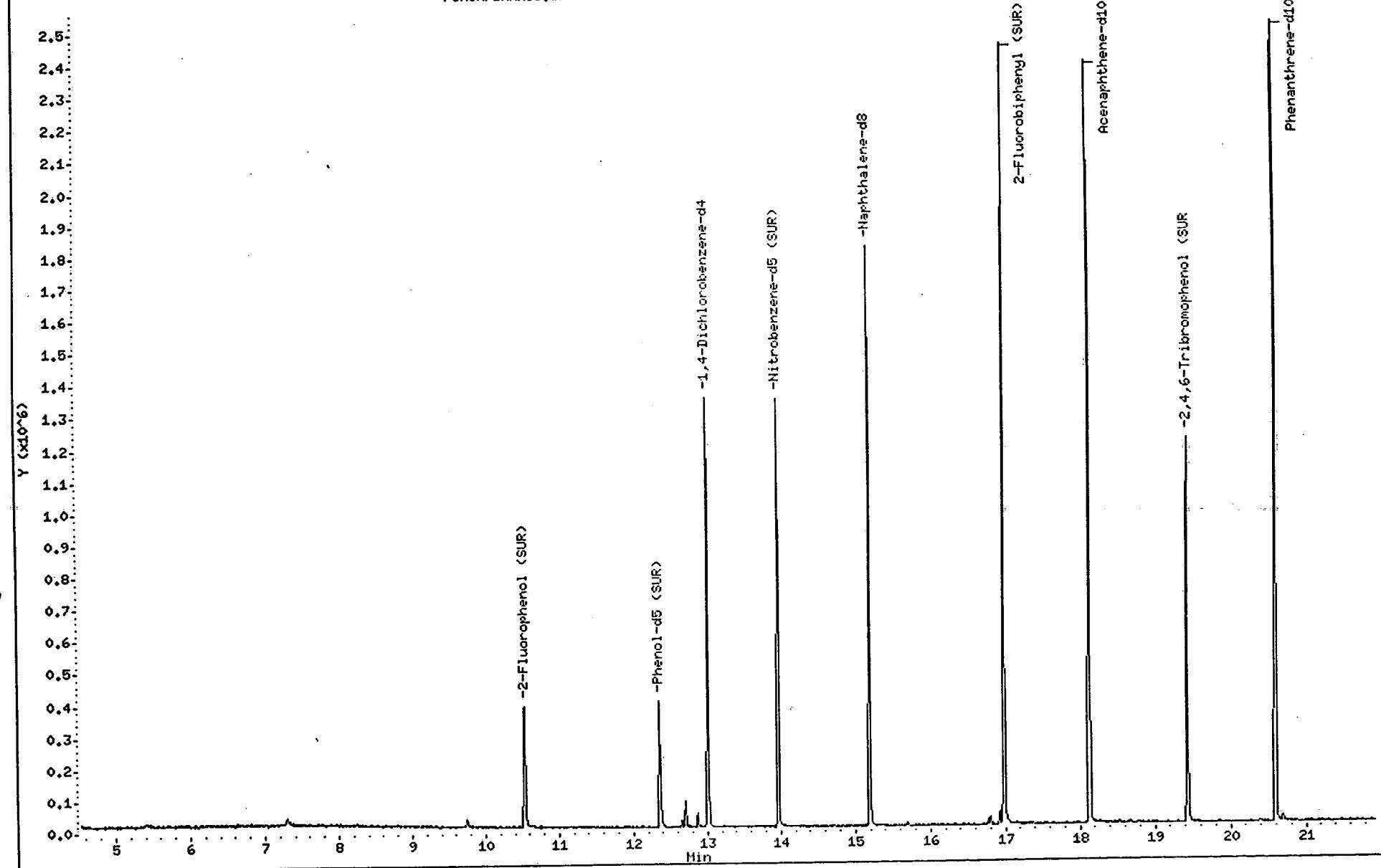
Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/07nov00.b/t4969.d (Part 1 of 2)



Data File: /chem/BNAMS3.i/625/11-06-00/07nov00.b/t4969.d

Date : 07-NOV-2000 12:20

Client ID: BNA

Sample Info: WB309;1000;2;1;

Purge Volume: 1000.0

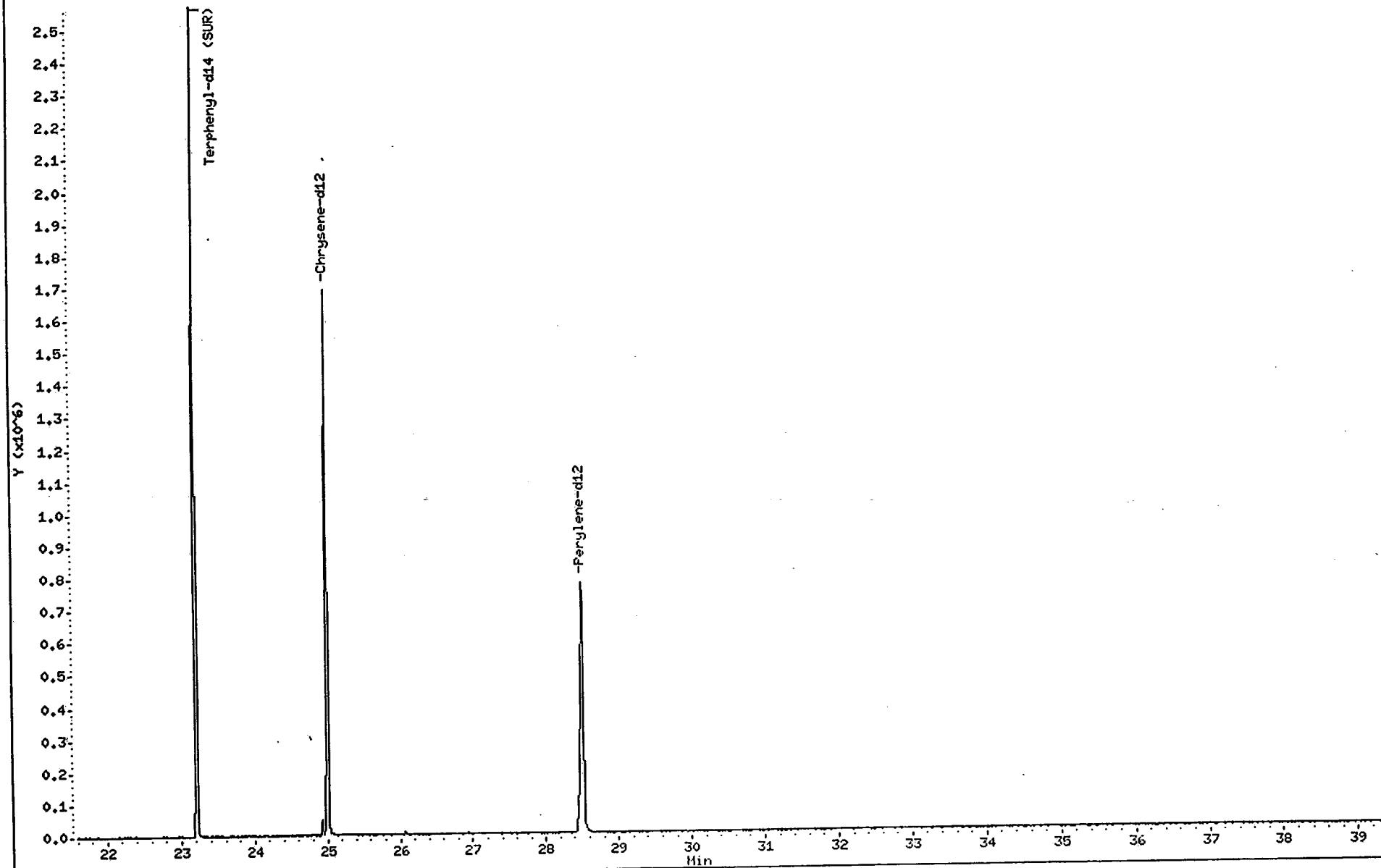
Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS 3

Column diameter: 0.53

/chem/BNAMS3.i/625/11-06-00/07nov00.b/t4969.d (Part 2 of 2)



SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA  
METHOD 625

Instrument ID: BNAMS3

Calibration Date(s): 11/06/00 11/06/00

Calibration Time(s): 1054 1412

LAB FILE ID:	RRF10: T4939 RRF80: T4940	RRF20: T4941 RRF120: T4938	RRE50	RRF80	RRF120
COMPOUND	RRF10	RRF20	RRE50	RRF80	RRF120
Phenol	2.831	2.782	3.030	3.195	3.143
2-Chlorophenol	1.371	1.326	1.410	1.470	1.527
2-Methylphenol	1.678	1.610	1.712	1.821	1.853
4-Methylphenol	1.757	1.788	1.875	1.767	1.551
2-Nitrophenol	0.201	0.209	0.219	0.221	0.228
2,4-Dimethylphenol	0.331	0.323	0.358	0.365	0.371
2,4-Dichlorophenol	0.325	0.324	0.340	0.334	0.342
4-Chloro-3-methylphenol	0.453	0.471	0.501	0.515	0.506
2,4,6-Trichlorophenol	0.333	0.342	0.377	0.376	0.381
2,4,5-Trichlorophenol	0.354	0.365	0.390	0.397	0.415
2,4-Dinitrophenol	0.145	0.219	0.226	0.256	0.260
4-Nitrophenol	0.293	0.318	0.330	0.324	0.340
4,6-Dinitro-2-methylphenol	0.105	0.136	0.135	0.143	0.152
Pentachlorophenol	0.091	0.102	0.103	0.095	0.100
Benzoic Acid	0.140	0.169	0.194	0.232	0.158
N-Nitrosodimethylamine	0.640	0.745	0.765	0.862	0.836
bis(2-Chloroethyl)ether	2.169	2.066	2.151	2.263	2.239
1,3-Dichlorobenzene	1.435	1.385	1.409	1.464	1.470
1,4-Dichlorobenzene	1.419	1.387	1.483	1.520	1.489
1,2-Dichlorobenzene	1.354	1.317	1.357	1.385	1.426
bis(2-chloroisopropyl)ether	2.944	2.906	3.064	3.175	3.347
N-Nitroso-di-n-propylamine	1.213	1.246	1.317	1.285	1.261
Hexachloroethane	0.759	0.728	0.780	0.801	0.807
Nitrobenzene	0.696	0.711	0.756	0.731	0.744
Isophorone	0.920	0.965	1.017	0.990	1.021
bis(2-Chloroethoxy)methane	0.686	0.704	0.732	0.742	0.739
1,2,4-Trichlorobenzene	0.358	0.368	0.378	0.389	0.388
Naphthalene	1.035	1.057	1.109	1.094	1.067
4-Chloroaniline	0.385	0.422	0.442	0.445	0.457
Hexachlorobutadiene	0.151	0.146	0.157	0.153	0.152
2-Methylnaphthalene	0.620	0.653	0.672	0.653	0.618
Hexachlorocyclopentadiene	0.100	0.105	0.157	0.145	0.161
2-Chloronaphthalene	1.051	1.048	1.080	1.080	1.048
2-Nitroaniline	0.415	0.440	0.449	0.450	0.447
Dimethylphthalate	1.475	1.481	1.512	1.502	1.472
Acenaphthylene	1.429	1.509	1.559	1.528	1.516
2,6-Dinitrotoluene	0.348	0.359	0.378	0.374	0.371
3-Nitroaniline	0.307	0.321	0.345	0.347	0.351
Acenaphthene	1.005	1.031	1.046	1.001	0.946

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date(s): 11/06/00 11/06/00

Calibration Time(s): 1054 1412

LAB FILE ID:	RRF10: T4939 RRF80: T4940	RRF20: T4941 RRF120: T4938	RRF50: T4937		
COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF120
Dibenzofuran	1.623	1.694	1.739	1.657	1.616
2,4-Dinitrotoluene	0.476	0.495	0.525	0.522	0.520
Diethylphthalate	1.461	1.470	1.545	1.448	1.408
4-Chlorophenyl-phenylether	0.474	0.482	0.505	0.476	0.407
Fluorene	1.325	1.365	1.405	1.272	1.177
4-Nitroaniline	0.340	0.344	0.368	0.341	0.337
N-Nitrosodiphenylamine	0.523	0.529	0.525	0.514	0.493
4-Bromophenyl-phenylether	0.121	0.129	0.128	0.116	0.114
Hexachlorobenzene	0.152	0.157	0.151	0.139	0.132
Phenanthrene	1.030	1.090	1.052	1.000	0.968
Anthracene	0.984	1.062	1.054	0.988	0.940
Carbazole	0.909	0.923	0.916	0.851	0.837
Di-n-butylphthalate	1.314	1.358	1.394	1.259	1.216
Fluoranthene	0.844	0.891	0.936	0.899	0.885
Pyrene	1.523	1.479	1.516	1.529	1.526
Benzidine	0.458	0.410	0.333	0.235	0.146
Butylbenzylphthalate	1.056	1.032	1.062	1.011	0.985
3,3'-Dichlorobenzidine	0.440	0.412	0.340	0.261	0.216
Benzo(a)anthracene	1.069	1.066	1.055	1.076	1.088
Chrysene	0.961	0.984	0.999	0.984	0.922
bis(2-Ethylhexyl)phthalate	1.417	1.471	1.331	1.090	1.036
Di-n-octylphthalate	2.563	2.651	2.907	2.685	2.779
Benzo(b)fluoranthene	1.077	1.104	1.163	1.161	1.340
Benzo(k)fluoranthene	1.073	1.098	1.148	1.128	1.095
Benzo(a)pyrene	0.986	1.041	1.069	1.073	1.140
Indeno(1,2,3-cd)pyrene	0.961	1.033	1.141	1.136	1.235
Dibenz(a,h)anthracene	0.963	0.992	1.060	1.077	1.159
Benzo(g,h,i)perylene	1.059	1.101	1.189	1.188	1.249
Pyridine	1.007	1.095	1.169	1.357	1.242
Aniline	2.514	2.479	2.738	2.975	2.907
Benzyl Alcohol	1.133	1.177	1.221	1.286	1.328
1,2-Diphenylhydrazine	0.912	0.963	0.974	0.944	0.946
Diphenyl	1.209	1.306	1.330	1.238	1.136
Diphenyl Ether	0.773	0.792	0.827	0.783	0.766
Acetophenone	2.837	2.988	3.088	2.963	2.718
N,N-Dimethylaniline	2.027	1.957	2.138	2.072	1.985
1,4-Dioxane	0.494	0.466	0.516	0.589	0.543
2,3,7,8-TCDD (screen)			0.138		
Benzaldehyde	1.340	1.215	0.821	0.660	0.484

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date(s): 11/06/00 11/06/00

Calibration Time(s): 1054 1412

LAB FILE ID:	RRF10: T4939 RRF80: T4940	RRF20: T4941 RRF120: T4938	RRF50: T4937		
COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF120
Caprolactum	0.167	0.174	0.186	0.194	0.176
Atrazine	0.157	0.167	0.155	0.151	0.156
2-Fluorophenol (SUR)	1.251	1.278	1.351	1.456	1.462
Phenol-d5 (SUR)	2.284	2.360	2.562	2.669	2.672
2,4,6-Tribromophenol (SUR)	0.156	0.162	0.179	0.161	0.167
Nitrobenzene-d5 (SUR)	0.586	0.594	0.633	0.639	0.648
2-Fluorobiphenyl (SUR)	1.283	1.347	1.376	1.336	1.277
Terphenyl-d14 (SUR)	0.918	0.901	0.880	0.737	0.663

SEMICVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date(s): 11/06/00 11/06/00

Calibration Time(s): 1054 1412

COMPOUND	CURVE	COEFFICIENT A1	%RSD OR R^2
Phenol	AVRG	2.99643691	6.1*
2-Chlorophenol	AVRG	1.42107019	5.6*
2-Methylphenol	AVRG	1.73482065	5.8*
4-Methylphenol	AVRG	1.74748809	6.8*
2-Nitrophenol	AVRG	0.21589766	4.9*
2,4-Dimethylphenol	AVRG	0.34955193	6.2*
2,4-Dichlorophenol	AVRG	0.33297996	2.6*
4-Chloro-3-methylphenol	AVRG	0.48901592	5.3*
2,4,6-Trichlorophenol	AVRG	0.36177839	6.2*
2,4,5-Trichlorophenol	AVRG	0.38412089	6.4*
2,4-Dinitrophenol	AVRG	0.22124630	20.8**
4-Nitrophenol	AVRG	0.32118627	5.5**
4,6-Dinitro-2-methylphenol	AVRG	0.13421923	13.2*
Pentachlorophenol	AVRG	0.09845014	5.2*
Benzoic Acid	AVRG	0.17866627	20.1*
N-Nitrosodimethylamine	AVRG	0.76985586	11.3**
bis(2-Chloroethyl)ether	AVRG	2.17747443	3.6*
1,3-Dichlorobenzene	AVRG	1.43250426	2.5*
1,4-Dichlorobenzene	AVRG	1.45960918	3.7*
1,2-Dichlorobenzene	AVRG	1.36805633	3.0*
bis(2-chloroisopropyl)ether	AVRG	3.08714159	5.8*
N-Nitroso-di-n-propylamine	AVRG	1.26457214	3.1**
Hexachloroethane	AVRG	0.77505701	4.2*
Nitrobenzene	AVRG	0.72776060	3.3*
Isophorone	AVRG	0.98265355	4.2*
bis(2-Chloroethoxy)methane	AVRG	0.72065403	3.4*
1,2,4-Trichlorobenzene	AVRG	0.37612081	3.5*
Naphthalene	AVRG	1.07230052	2.7*
4-Chloroaniline	AVRG	0.43031543	6.5*
Hexachlorobutadiene	AVRG	0.15176455	2.7*
2-Methylnaphthalene	AVRG	0.64344523	3.6*
Hexachlorocyclopentadiene	AVRG	0.13375148	21.7**
2-Chloronaphthalene	AVRG	1.06162804	1.6*
2-Nitroaniline	AVRG	0.44041435	3.3*
Dimethylphthalate	AVRG	1.48828731	1.2*
Acenaphthylene	AVRG	1.50826326	3.2*
2,6-Dinitrotoluene	AVRG	0.36609191	3.4*
3-Nitroaniline	AVRG	0.33428728	5.8*
Acenaphthene	AVRG	1.00588060	3.8*

\* Compound with required maximum % RSD value.

\*\* Compound with required minimum RRF value.

SEMICVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date(s) : 11/06/00 11/06/00

Calibration Time(s) : 1054 1412

COMPOUND	CURVE	COEFFICIENT A1	%RSD OR R^2
Dibenzofuran	AVRG	1.66576504	3.1*
2,4-Dinitrotoluene	AVRG	0.50760759	4.2*
Diethylphthalate	AVRG	1.46649515	3.4*
4-Chlorophenyl-phenylether	AVRG	0.46896958	7.8*
Fluorene	AVRG	1.30882856	6.8*
4-Nitroaniline	AVRG	0.34616070	3.6*
N-Nitrosodiphenylamine	AVRG	0.51697087	2.8*
4-Bromophenyl-phenylether	AVRG	0.12162507	5.4*
Hexachlorobenzene	AVRG	0.14601711	7.0*
Phanthrene	AVRG	1.02807211	4.6*
Anthracene	AVRG	1.00573700	5.1*
Carbazole	AVRG	0.88704472	4.5*
Di-n-butylphthalate	AVRG	1.30834929	5.5*
Fluoranthene	AVRG	0.89099067	3.6*
Pyrene	AVRG	1.51456258	1.3*
Benzidine	AVRG	0.31632261	40.2*
Butylbenzylphthalate	AVRG	1.02926953	3.1*
3,3'-Dichlorobenzidine	AVRG	0.33388221	28.6*
Benzo(a)anthracene	AVRG	1.07102651	1.1*
Chrysene	AVRG	0.97007514	3.1*
bis(2-Ethylhexyl)phthalate	AVRG	1.26919122	15.4*
Di-n-octylphthalate	AVRG	2.71701003	4.8*
Benzo(b)fluoranthene	AVRG	1.16897265	8.8*
Benzo(k)fluoranthene	AVRG	1.10880731	2.7*
Benzo(a)pyrene	AVRG	1.06196489	5.3*
Indeno(1,2,3-cd)pyrene	AVRG	1.10129686	9.6*
Dibenz(a,h)anthracene	AVRG	1.05036186	7.3*
Benzo(g,h,i)perylene	AVRG	1.15717338	6.6*
Pyridine	AVRG	1.17406067	11.4*
Aniline	AVRG	2.72292380	8.2*
Benzyl Alcohol	AVRG	1.22908362	6.5*
1,2-Diphenylhydrazine	AVRG	0.94799302	2.5*
Diphenyl	AVRG	1.24379258	6.3**
Diphenyl Ether	AVRG	0.78835055	3.0**
Acetophenone	AVRG	2.91897852	4.9**
N,N-Dimethylaniline	AVRG	2.03589042	3.5**
1,4-Dioxane	AVRG	0.52160328	9.0**
2,3,7,8-TCDD (screen)	AVRG	0.13855187	0.0*
Benzaldehyde	AVRG	0.90398882	40.2*

\* Compound with required maximum % RSD value.

\*\* Compound with required minimum RRF value.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date(s): 11/06/00 11/06/00

Calibration Time(s): 1054 1412

COMPOUND	CURVE	COEFFICIENT A1	%RSD OR R^2
Caprolactum _____	AVRG	0.17935333	6.0*
Atrazine _____	AVRG	0.15726871	3.7*
2-Fluorophenol (SUR) _____	AVRG	1.35977808	7.2*
Phenol-d5 (SUR) _____	AVRG	2.50965192	7.1*
2,4,6-Tribromophenol (SUR) _____	AVRG	0.16505830	5.2*
Nitrobenzene-d5 (SUR) _____	AVRG	0.62025487	4.6*
2-Fluorobiphenyl (SUR) _____	AVRG	1.32376560	3.2*
Terphenyl-d14 (SUR) _____	AVRG	0.81987473	13.8*

\* Compound with required maximum % RSD value.

\*\* Compound with required minimum RRF value.

SEMIVOLATILE ORGANICS CONTINUING CALIBRATION CHECK  
METHOD 625

Instrument ID: BNAMS3

Calibration Date: 11/07/00 Time: 0907

Lab File ID: T4965

Init. Calib. Date(s): 11/06/00 11/06/00

Init. Calib. Times: 1054 1412

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	2.996	3.094		-3.3	20.0
2-Chlorophenol	1.421	1.364		4.0	20.0
2-Methylphenol	1.735	1.703		1.8	
4-Methylphenol	1.748	1.857		-6.2	
2-Nitrophenol	0.216	0.220		-1.8	20.0
2,4-Dimethylphenol	0.350	0.347		0.8	20.0
2,4-Dichlorophenol	0.333	0.350		-5.1	20.0
4-Chloro-3-methylphenol	0.489	0.504		-3.1	20.0
2,4,6-Trichlorophenol	0.362	0.349		3.6	20.0
2,4,5-Trichlorophenol	0.384	0.368		4.2	
2,4-Dinitrophenol	0.221	0.248	0.05	-12.2	20.0
4-Nitrophenol	0.321	0.324	0.05	-0.9	20.0
4,6-Dinitro-2-methylphenol	0.134	0.148		-10.4	20.0
Pentachlorophenol	0.098	0.106		-8.2	20.0
Benzoic Acid	0.179	0.218		-21.8	
N-Nitrosodimethylamine	0.770	0.886	0.01	-15.1	20.0
bis(2-Chloroethyl)ether	2.178	2.203		-1.1	20.0
1,3-Dichlorobenzene	1.433	1.383		3.5	20.0
1,4-Dichlorobenzene	1.460	1.500		-2.7	20.0
1,2-Dichlorobenzene	1.368	1.349		1.4	20.0
bis(2-chloroisopropyl)ether	3.087	3.131		-1.4	20.0
N-Nitroso-di-n-propylamine	1.264	1.357	0.5	-7.4	20.0
Hexachloroethane	0.775	0.747		3.6	20.0
Nitrobenzene	0.728	0.771		-5.9	20.0
Isophorone	0.983	1.040		-5.8	20.0
bis(2-Chloroethoxy)methane	0.721	0.720		0.1	20.0
1,2,4-Trichlorobenzene	0.376	0.377		-0.3	20.0
Naphthalene	1.072	1.102		-2.8	20.0
4-Chloroaniline	0.430	0.426		0.9	
Hexachlorobutadiene	0.152	0.148		2.6	20.0
2-Methylnaphthalene	0.643	0.680		-5.8	
Hexachlorocyclopentadiene	0.134	0.135	0.05	-0.7	20.0
2-Chloronaphthalene	1.061	1.071		-0.9	20.0
2-Nitroaniline	0.440	0.425		3.4	
Dimethylphthalate	1.488	1.507		-1.3	20.0
Acenaphthylene	1.508	1.518		-0.7	20.0
2,6-Dinitrotoluene	0.366	0.381		-4.1	20.0

SEMIVOLATILE ORGANICS CONTINUING CALIBRATION CHECK(cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date: 11/07/00 Time: 0907

Lab File ID: T4965

Init. Calib. Date(s): 11/06/00 11/06/00

Init. Calib. Times: 1054 1412

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
3-Nitroaniline	0.334	0.338		-1.2	
Acenaphthene	1.006	1.034		-2.8	20.0
Dibenzofuran	1.666	1.669		-0.2	
2,4-Dinitrotoluene	0.508	0.510		-0.4	20.0
Diethylphthalate	1.466	1.495		-2.0	20.0
4-Chlorophenyl-phenylether	0.469	0.492		-4.9	20.0
Fluorene	1.309	1.378		-5.3	20.0
4-Nitroaniline	0.346	0.350		-1.2	
N-Nitrosodiphenylamine	0.517	0.536		-3.7	20.0
4-Bromophenyl-phenylether	0.122	0.125		-2.4	20.0
Hexachlorobenzene	0.146	0.159		-8.9	20.0
Phenanthrene	1.028	1.097		-6.7	20.0
Anthracene	1.006	1.079		-7.2	20.0
Carbazole	0.887	0.944		-6.4	
Di-n-butylphthalate	1.308	1.425		-8.9	20.0
Fluoranthene	0.891	0.934		-4.8	20.0
Pyrene	1.515	1.524		-0.6	20.0
Benzidine	0.316	0.315		0.3	
Butylbenzylphthalate	1.029	1.074		-4.4	20.0
3,3'-Dichlorobenzidine	0.334	0.317		5.1	20.0
Benzo(a)anthracene	1.071	1.092		-2.0	20.0
Chrysene	0.970	1.029		-6.1	20.0
bis(2-Ethylhexyl)phthalate	1.269	1.230		3.1	20.0
Di-n-octylphthalate	2.717	2.862		-5.3	20.0
Benzo(b)fluoranthene	1.169	1.168		0.1	20.0
Benzo(k)fluoranthene	1.108	1.123		-1.4	20.0
Benzo(a)pyrene	1.062	1.073		-1.0	20.0
Indeno(1,2,3-cd)pyrene	1.101	1.123		-2.0	20.0
Dibenz(a,h)anthracene	1.050	1.107		-5.4	20.0
Benzo(g,h,i)perylene	1.157	1.171		-1.2	20.0
Pyridine	1.174	1.358		-15.7	
Aniline	2.723	2.827		-3.8	
Benzyl Alcohol	1.229	1.189		3.2	
1,2-Diphenylhydrazine	0.948	1.000		-5.5	
Diphenyl	1.244	1.276	0.001	-2.6	20.0
Diphenyl Ether	0.788	0.794	0.001	-0.8	20.0
Acetophenone	2.919	3.087	0.001	-5.8	20.0

SEMIVOLATILE ORGANICS CONTINUING CALIBRATION CHECK (cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date: 11/07/00 Time: 0907

Lab File ID: T4965

Init. Calib. Date(s): 11/06/00 11/06/00

Init. Calib. Times: 1054 1412

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
N,N-Dimethylaniline	2.036	2.062	0.001	-1.3	20.0
1,4-Dioxane	0.522	0.587	0.01	-12.4	20.0
2,3,7,8-TCDD (screen)	0.138	0.147		-6.5	20.0
Benzaldehyde	0.904	0.843		6.7	20.0
Caprolactum	0.179	0.178		0.6	20.0
Atrazine	0.157	0.141		10.2	20.0
2-Fluorophenol (SUR)	1.360	1.269		6.7	
Phenol-d5 (SUR)	2.509	2.509		0.0	
2,4,6-Tribromophenol (SUR)	0.165	0.177		-7.3	20.0
Nitrobenzene-d5 (SUR)	0.620	0.626		-1.0	
2-Fluorobiphenyl (SUR)	1.324	1.316		0.6	
Terphenyl-d14 (SUR)	0.820	0.863		-5.2	

SEMIVOLATILE ORGANICS CONTINUING CALIBRATION CHECK  
METHOD 625

Instrument ID: BNAMS3

Calibration Date: 11/08/00 Time: 0826

Lab File ID: T4993

Init. Calib. Date(s): 11/06/00 11/06/00

Init. Calib. Times: 1054 1412

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	2.996	3.053		-1.9	20.0
2-Chlorophenol	1.421	1.295		8.9	20.0
2-Methylphenol	1.735	1.594		8.1	
4-Methylphenol	1.748	1.692		3.2	
2-Nitrophenol	0.216	0.229		-6.0	20.0
2,4-Dimethylphenol	0.350	0.350		0.0	20.0
2,4-Dichlorophenol	0.333	0.349		-4.8	20.0
4-Chloro-3-methylphenol	0.489	0.482		1.4	20.0
2,4,6-Trichlorophenol	0.362	0.351		3.0	20.0
2,4,5-Trichlorophenol	0.384	0.366		4.7	
2,4-Dinitrophenol	0.221	0.252	0.05	-14.0	20.0
4-Nitrophenol	0.321	0.315	0.05	1.9	20.0
4,6-Dinitro-2-methylphenol	0.134	0.147		-9.7	20.0
Pentachlorophenol	0.098	0.104		-6.1	20.0
Benzoic Acid	0.179	0.180		-0.6	
N-Nitrosodimethylamine	0.770	0.896	0.01	-16.4	20.0
bis(2-Chloroethyl)ether	2.178	2.206		-1.3	20.0
1,3-Dichlorobenzene	1.433	1.378		3.8	20.0
1,4-Dichlorobenzene	1.460	1.433		1.8	20.0
1,2-Dichlorobenzene	1.368	1.334		2.5	20.0
bis(2-chloroisopropyl)ether	3.087	3.064		0.7	20.0
N-Nitroso-di-n-propylamine	1.264	1.307	0.5	-3.4	20.0
Hexachloroethane	0.775	0.721		7.0	20.0
Nitrobenzene	0.728	0.784		-7.7	20.0
Isophorone	0.983	1.089		-10.8	20.0
bis(2-Chloroethoxy)methane	0.721	0.777		-7.8	20.0
1,2,4-Trichlorobenzene	0.376	0.382		-1.6	20.0
Naphthalene	1.072	1.124		-4.8	20.0
4-Chloroaniline	0.430	0.429		0.2	
Hexachlorobutadiene	0.152	0.156		-2.6	20.0
2-Methylnaphthalene	0.643	0.678		-5.4	
Hexachlorocyclopentadiene	0.134	0.136	0.05	-1.5	20.0
2-Chloronaphthalene	1.061	1.080		-1.8	20.0
2-Nitroaniline	0.440	0.414		5.9	
Dimethylphthalate	1.488	1.515		-1.8	20.0
Acenaphthylene	1.508	1.546		-2.5	20.0
2,6-Dinitrotoluene	0.366	0.388		-6.0	20.0

SEMICVOLATILE ORGANICS CONTINUING CALIBRATION CHECK (cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date: 11/08/00 Time: 0826

Lab File ID: T4993

Init. Calib. Date(s): 11/06/00 11/06/00

Init. Calib. Times: 1054 1412

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
3-Nitroaniline	0.334	0.343		-2.7	
Acenaphthene	1.006	1.040		-3.4	20.0
Dibenzofuran	1.666	1.690		-1.4	
2,4-Dinitrotoluene	0.508	0.517		-1.8	20.0
Diethylphthalate	1.466	1.504		-2.6	20.0
4-Chlorophenyl-phenylether	0.469	0.459		2.1	20.0
Fluorene	1.309	1.350		-3.1	20.0
4-Nitroaniline	0.346	0.362		-4.6	
N-Nitrosodiphenylamine	0.517	0.551		-6.6	20.0
4-Bromophenyl-phenylether	0.122	0.133		-9.0	20.0
Hexachlorobenzene	0.146	0.150		-2.7	20.0
Phenanthrene	1.028	1.107		-7.7	20.0
Anthracene	1.006	1.082		-7.6	20.0
Carbazole	0.887	0.979		-10.4	
Di-n-butylphthalate	1.308	1.400		-7.0	20.0
Fluoranthene	0.891	0.880		1.2	20.0
Pyrene	1.515	1.489		1.7	20.0
Benzidine	0.316	0.343		-8.5	
Butylbenzylphthalate	1.029	1.076		-4.6	20.0
3,3'-Dichlorobenzidine	0.334	0.290		13.2	20.0
Benzo(a)anthracene	1.071	1.109		-3.5	20.0
Chrysene	0.970	1.012		-4.3	20.0
bis(2-Ethylhexyl)phthalate	1.269	1.161		8.5	20.0
Di-n-octylphthalate	2.717	2.777		-2.2	20.0
Benzo(b)fluoranthene	1.169	1.174		-0.4	20.0
Benzo(k)fluoranthene	1.108	1.183		-6.8	20.0
Benzo(a)pyrene	1.062	1.069		-0.6	20.0
Indeno(1,2,3-cd)pyrene	1.101	1.107		-0.5	20.0
Dibenz(a,h)anthracene	1.050	1.069		-1.8	20.0
Benzo(g,h,i)perylene	1.157	1.113		3.8	20.0
Pyridine	1.174	1.380		-17.5	
Aniline	2.723	2.791		-2.5	
Benzyl Alcohol	1.229	1.133		7.8	
1,2-Diphenylhydrazine	0.948	1.021	0.001	-7.7	
Diphenyl	1.244	1.295	0.001	-4.1	20.0
Diphenyl Ether	0.788	0.799	0.001	-1.4	20.0
Acetophenone	2.919	2.858	0.001	2.1	20.0

SEMIVOLATILE ORGANICS CONTINUING CALIBRATION CHECK(cont'd)  
METHOD 625

Instrument ID: BNAMS3      Calibration Date: 11/08/00      Time: 0826  
 Lab File ID: T4993      Init. Calib. Date(s): 11/06/00      11/06/00  
                         Init. Calib. Times:      1054      1412

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
N,N-Dimethylaniline	2.036	1.956	0.001	3.9	20.0
1,4-Dioxane	0.522	0.593	0.01	-13.6	20.0
2,3,7,8-TCDD (screen)	0.138	0.156		-13.0	20.0
Benzaldehyde	0.904	0.970		-7.3	20.0
Caprolactum	0.179	0.177		1.1	20.0
Atrazine	0.157	0.143		8.9	20.0
2-Fluorophenol (SUR)	1.360	1.207		11.2	
Phenol-d5 (SUR)	2.509	2.457		2.1	
2,4,6-Tribromophenol (SUR)	0.165	0.175		-6.1	20.0
Nitrobenzene-d5 (SUR)	0.620	0.677		-9.2	
2-Fluorobiphenyl (SUR)	1.324	1.352		-2.1	
Terphenyl-d14 (SUR)	0.820	0.868		-5.8	

SEMIVOLATILE ORGANICS CONTINUING CALIBRATION CHECK  
METHOD 625

Instrument ID: BNAMS3

Calibration Date: 11/09/00 Time: 0845

Lab File ID: T5021

Init. Calib. Date(s): 11/06/00 11/06/00

Init. Calib. Times: 1054 1412

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	2.996	3.096		-3.3	20.0
2-Chlorophenol	1.421	1.388		2.3	20.0
2-Methylphenol	1.735	1.654		4.7	
4-Methylphenol	1.748	1.747		0.0	
2-Nitrophenol	0.216	0.236		-9.2	20.0
2,4-Dimethylphenol	0.350	0.353		-0.8	20.0
2,4-Dichlorophenol	0.333	0.368		-10.5	20.0
4-Chloro-3-methylphenol	0.489	0.498		-1.8	20.0
2,4,6-Trichlorophenol	0.362	0.346		4.4	20.0
2,4,5-Trichlorophenol	0.384	0.375		2.3	
2,4-Dinitrophenol	0.221	0.216	0.05	2.3	20.0
4-Nitrophenol	0.321	0.307	0.05	4.4	20.0
4,6-Dinitro-2-methylphenol	0.134	0.138		-3.0	20.0
Pentachlorophenol	0.098	0.102		-4.1	20.0
Benzoic Acid	0.179	0.171		4.5	
N-Nitrosodimethylamine	0.770	0.832	0.01	-8.0	20.0
bis(2-Chloroethyl)ether	2.178	2.187		-0.4	20.0
1,3-Dichlorobenzene	1.433	1.408		1.7	20.0
1,4-Dichlorobenzene	1.460	1.460		0.0	20.0
1,2-Dichlorobenzene	1.368	1.387		-1.4	20.0
bis(2-chloroisopropyl)ether	3.087	2.976		3.6	20.0
N-Nitroso-di-n-propylamine	1.264	1.303	0.5	-3.1	20.0
Hexachloroethane	0.775	0.730		5.8	20.0
Nitrobenzene	0.728	0.766		-5.2	20.0
Isophorone	0.983	1.068		-8.6	20.0
bis(2-Chloroethoxy)methane	0.721	0.767		-6.4	20.0
1,2,4-Trichlorobenzene	0.376	0.386		-2.6	20.0
Naphthalene	1.072	1.104		-3.0	20.0
4-Chloroaniline	0.430	0.446		-3.7	
Hexachlorobutadiene	0.152	0.154		-1.3	20.0
2-Methylnaphthalene	0.643	0.696		-8.2	
Hexachlorocyclopentadiene	0.134	0.124	0.05	7.5	20.0
2-Chloronaphthalene	1.061	1.063		-0.2	20.0
2-Nitroaniline	0.440	0.408		7.3	
Dimethylphthalate	1.488	1.522		-2.3	20.0
Acenaphthylene	1.508	1.519		-0.7	20.0
2,6-Dinitrotoluene	0.366	0.385		-5.2	20.0

SEMIVOLATILE ORGANICS CONTINUING CALIBRATION CHECK (cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date: 11/09/00 Time: 0845

Lab File ID: T5021

Init. Calib. Date(s): 11/06/00 11/06/00

Init. Calib. Times: 1054 1412

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
3-Nitroaniline	0.334	0.335		-0.3	
Acenaphthene	1.006	1.031		-2.5	20.0
Dibenzofuran	1.666	1.725		-3.5	
2,4-Dinitrotoluene	0.508	0.520		-2.4	20.0
Diethylphthalate	1.466	1.507		-2.8	20.0
4-Chlorophenyl-phenylether	0.469	0.444		5.3	20.0
Fluorene	1.309	1.361		-4.0	20.0
4-Nitroaniline	0.346	0.360		-4.0	
N-Nitrosodiphenylamine	0.517	0.548		-6.0	20.0
4-Bromophenyl-phenylether	0.122	0.127		-4.1	20.0
Hexachlorobenzene	0.146	0.158		-8.2	20.0
Phenanthrene	1.028	1.066		-3.7	20.0
Anthracene	1.006	1.073		-6.7	20.0
Carbazole	0.887	0.936		-5.5	
Di-n-butylphthalate	1.308	1.346		-2.9	20.0
Fluoranthene	0.891	0.855		4.0	20.0
Pyrene	1.515	1.542		-1.8	20.0
Benzidine	0.316	0.265		16.1	
Butylbenzylphthalate	1.029	1.084		-5.3	20.0
3,3'-Dichlorobenzidine	0.334	0.289		13.5	20.0
Benzo(a)anthracene	1.071	1.104		-3.1	20.0
Chrysene	0.970	1.001		-3.2	20.0
bis(2-Ethylhexyl)phthalate	1.269	1.189		6.3	20.0
Di-n-octylphthalate	2.717	2.819		-3.8	20.0
Benzo(b)fluoranthene	1.169	1.249		-6.8	20.0
Benzo(k)fluoranthene	1.108	1.163		-5.0	20.0
Benzo(a)pyrene	1.062	1.063		-0.1	20.0
Indeno(1,2,3-cd)pyrene	1.101	1.063		3.4	20.0
Dibenz(a,h)anthracene	1.050	1.053		-0.3	20.0
Benzo(g,h,i)perylene	1.157	1.104		4.6	20.0
Pyridine	1.174	1.334		-13.6	
Aniline	2.723	2.768		-1.6	
Benzyl Alcohol	1.229	1.185		3.6	
1,2-Diphenylhydrazine	0.948	0.948		0.0	
Diphenyl	1.244	1.278	0.001	-2.7	20.0
Diphenyl Ether	0.788	0.798	0.001	-1.3	20.0
Acetophenone	2.919	2.901	0.001	0.6	20.0

SEMIVOLATILE ORGANICS CONTINUING CALIBRATION CHECK(cont'd)  
METHOD 625

Instrument ID: BNAMS3

Calibration Date: 11/09/00 Time: 0845

Lab File ID: T5021

Init. Calib. Date(s): 11/06/00 11/06/00

Init. Calib. Times: 1054 1412

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
N,N-Dimethylaniline	2.036	2.025	0.001	0.5	20.0
1,4-Dioxane	0.522	0.532	. 0.01	-1.9	20.0
2,3,7,8-TCDD (screen)	0.138	0.142		-2.9	20.0
Benzaldehyde	0.904	0.961		-6.3	20.0
Caprolactum	0.179	0.188		-5.0	20.0
Atrazine	0.157	0.138		12.1	20.0
2-Fluorophenol (SUR)	1.360	1.260		7.4	
Phenol-d5 (SUR)	2.509	2.522		-0.5	
2,4,6-Tribromophenol (SUR)	0.165	0.179		-8.5	20.0
Nitrobenzene-d5 (SUR)	0.620	0.662		-6.8	
2-Fluorobiphenyl (SUR)	1.324	1.345		-1.6	
Terphenyl-d14 (SUR)	0.820	0.884		-7.8	

SEMI-VOLATILE SURROGATE RECOVERY  
METHOD 625

Matrix: WATER

Level: LOW

Lab Job No: F165

	LAB SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
01	WB309	40	26	86	93	83	102	0
02	238249				106	89	94	0
03	238250				106	94	95	0
04	238251				108	92	96	0
05	238252				101	85	90	0
06	238253				109	96	97	0
07	238256				108	94	90	0
08	238257				82	69	73	0
09	238259				111	93	100	0
10	238255				96	90	91	0
11	238254				OD	OD	OD	0
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

QC LIMITS

S1	= 2-Fluorophenol	( 4- 80)
S2	= Phenol-d5	(10- 53)
S3	= 2,4,6-Tribromophenol	(47-136)
S4	= Nitrobenzene-d5	(59-117)
S5	= 2-Fluorobiphenyl	(44-120)
S6	= Terphenyl-d14	(56-122)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D System Monitoring Compound diluted out

SEMI-VOLATILE SPIKE RECOVERY SUMMARY  
METHOD 625

Matrix: WATER

Matrix Spike - Lab Sample No.: 239605

Level: LOW

MS Sample from Lab Job No: F384

QA Batch: 5915

Compound	MS % REC.	BS % REC.	LIMITS
Phenol	51	27	5-112
2-Chlorophenol	86	77	23-134
2-Nitrophenol	99	89	29-182
2,4-Dimethylphenol	85	83	32-119
2,4-Dichlorophenol	100	92	39-135
4-Chloro-3-methylphenol	95	90	22-147
2,4,6-Trichlorophenol	90	88	37-144
2,4-Dinitrophenol	100	90	0-191
4-Nitrophenol	51	29	0-132
4,6-Dinitro-2-methylphenol	110	100	0-181
Pentachlorophenol	100	100	14-176
bis(2-Chloroethyl)ether	98	87	12-158
1,3-Dichlorobenzene	76	67	0-172
1,4-Dichlorobenzene	81	73	20-124
1,2-Dichlorobenzene	86	77	32-129
bis(2-chloroisopropyl)ether	100	91	36-166
N-Nitroso-di-n-propylamine	110	97	0-230
Hexachloroethane	61	58	40-113
Nitrobenzene	100	95	35-180
Isophorone	99	88	21-196
bis(2-Chloroethoxy)methane	100	93	33-184
1,2,4-Trichlorobenzene	82	78	44-142
Naphthalene	95	88	21-133
Hexachlorobutadiene	53	52	24-116
2-Chloronaphthalene	95	89	60-118
Dimethylphthalate	100	99	0-112
Acenaphthylene	96	94	33-145
2,6-Dinitrotoluene	100	99	50-158
Acenaphthene	100	97	47-145
2,4-Dinitrotoluene	100	98	39-139

\* Values outside of QC limits

SEMI-VOLATILE SPIKE RECOVERY SUMMARY  
METHOD 625

Matrix: WATER

Matrix Spike - Lab Sample No.: 239605

Level: LOW

MS Sample from Lab Job No: F384

QA Batch: 5915

Compound	MS % REC.	BS % REC.	LIMITS
Diethylphthalate	100	99	0-114
4-Chlorophenyl-phenylether	95	96	25-158
Fluorene	100	99	59-121
4-Bromophenyl-phenylether	100	100	53-127
Hexachlorobenzene	110	110	0-152
Phenanthrene	100	100	54-120
Anthracene	110	110	27-133
Di-n-butylphthalate	110	100	1-118
Fluoranthene	100	100	26-137
Pyrene	100	100	52-115
Butylbenzylphthalate	110	100	0-152
3,3'-Dichlorobenzidine	98	98	0-262
Benzo(a)anthracene	110	99	33-143
Chrysene	110	100	17-168
bis(2-Ethylhexyl)phthalate	118	110	8-158
Di-n-octylphthalate	100	97	4-146
Benzo(b)fluoranthene	97	98	24-159
Benzo(k)fluoranthene	110	99	11-162
Benzo(a)pyrene	100	98	17-163
Indeno(1,2,3-cd)pyrene	100	98	0-171
Dibenz(a,h)anthracene	100	100	0-227
Benzo(g,h,i)perylene	100	96	0-219

\* Values outside of QC limits

Spike Recovery: 0 out of 104 outside limits

COMMENTS: \_\_\_\_\_

## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): T4965

Date Analyzed: 11/07/00

Instrument ID: BNAMS3

Time Analyzed: 0907

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(CRY) AREA #	RT #
12 HOUR STD	342546	13.01	1328746	15.20	1077847	25.03
UPPER LIMIT	685092	13.51	2657492	15.70	2155694	25.53
LOWER LIMIT	171273	12.51	664373	14.70	538924	24.53
LABORATORY SAMPLE NO.						
01 WB309	244714	13.01	953465	15.20	846102	25.01
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (CRY) = Chrysene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag internal standard area values with an asterisk.

\* Values outside of QC limits.

## SEMICVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): T4965

Date Analyzed: 11/07/00

Instrument ID: BNAMS3

Time Analyzed: 0907

	IS4(ANT) AREA #	RT #	IS5(PHN) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	937674	18.13	1761397	20.61	970671	28.54
UPPER LIMIT	1875348	18.63	3522794	21.11	1941342	29.04
LOWER LIMIT	468837	17.63	880698	20.11	485336	28.04
LABORATORY SAMPLE NO.						
01 WB309	694100	18.13	1303094	20.60	790475	28.52
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (ANT) = Acenaphthene-d10

IS5 (PHN) = Phenanthrene-d10

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag internal standard area values with an asterisk.

\* Values outside of QC limits.

## SEMICVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): T4993

Date Analyzed: 11/08/00

Instrument ID: BNAMS3

Time Analyzed: 0826

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (CRY) AREA #	RT #
12 HOUR STD	353036	13.02	1313693	15.21	1003074	25.04
UPPER LIMIT	706072	13.52	2627386	15.71	2006148	25.54
LOWER LIMIT	176518	12.52	656846	14.71	501537	24.54
LABORATORY SAMPLE NO.						
01	238249	226064	13.00	836289	15.19	751533
02	238250	220479	13.00	836689	15.19	723700
03	238251	229538	13.01	828083	15.19	730960
04	238252	214260	13.00	791217	15.19	682544
05	238253	219181	13.01	827073	15.19	712618
06	238256	226216	13.00	833380	15.19	720967
07	238257	223908	13.00	827100	15.20	740981
08	238259	230395	13.00	811921	15.19	737348
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (CRY) = Chrysene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag internal standard area values with an asterisk.

\* Values outside of QC limits.

## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): T4993

Date Analyzed: 11/08/00

Instrument ID: BNAMS3

Time Analyzed: 0826

	IS4(ANT) AREA #	RT #	IS5(PHN) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	915153	18.14	1690809	20.61	948415	28.55
UPPER LIMIT	1830306	18.64	3381618	21.11	1896830	29.05
LOWER LIMIT	457576	17.64	845404	20.11	474208	28.05
LABORATORY SAMPLE NO.						
01 238249	654000	18.12	1123590	20.59	731443	28.50
02 238250	632533	18.12	1112293	20.59	718445	28.50
03 238251	632448	18.12	1094056	20.59	713048	28.50
04 238252	623885	18.12	1072674	20.59	715082	28.51
05 238253	620706	18.12	1116279	20.59	713504	28.51
06 238256	619370	18.12	1112890	20.59	707286	28.51
07 238257	635192	18.13	1083350	20.59	725303	28.52
08 238259	624720	18.12	1097516	20.59	732900	28.51
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (ANT) = Acenaphthene-d10

IS5 (PHN) = Phenanthrene-d10

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag internal standard area values with an asterisk.

\* Values outside of QC limits.

## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): T5021

Date Analyzed: 11/09/00

Instrument ID: BNAMS3

Time Analyzed: 0845

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (CRY) AREA #	RT #
12 HOUR STD	314714	13.03	1200862	15.21	958922	25.03
UPPER LIMIT	629428	13.53	2401724	15.71	1917844	25.53
LOWER LIMIT	157357	12.53	600431	14.71	479461	24.53
LABORATORY SAMPLE NO.						
01 238255	249469	13.01	934792	15.20	825154	25.01
02 238254	226417	13.01	861380	15.20	739805	25.01
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (CRY) = Chrysene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag internal standard area values with an asterisk.

\* Values outside of QC limits.

## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): T5021

Date Analyzed: 11/09/00

Instrument ID: BNAMS3

Time Analyzed: 0845

	IS4 (ANT) AREA #	RT #	IS5 (PHN) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	884688	18.14	1682702	20.61	905548	28.55
UPPER LIMIT	1769376	18.64	3365404	21.11	1811096	29.05
LOWER LIMIT	442344	17.64	841351	20.11	452774	28.05
LABORATORY SAMPLE NO.						
01	238255	703987	1302779	20.60	788291	28.52
02	238254	652169	1189124	20.60	731335	28.52
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (ANT) = Acenaphthene-d10

IS5 (PHN) = Phenanthrene-d10

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag internal standard area values with an asterisk.

\* Values outside of QC limits.

Client ID: MW-15S  
Site: L.E. Carpenter

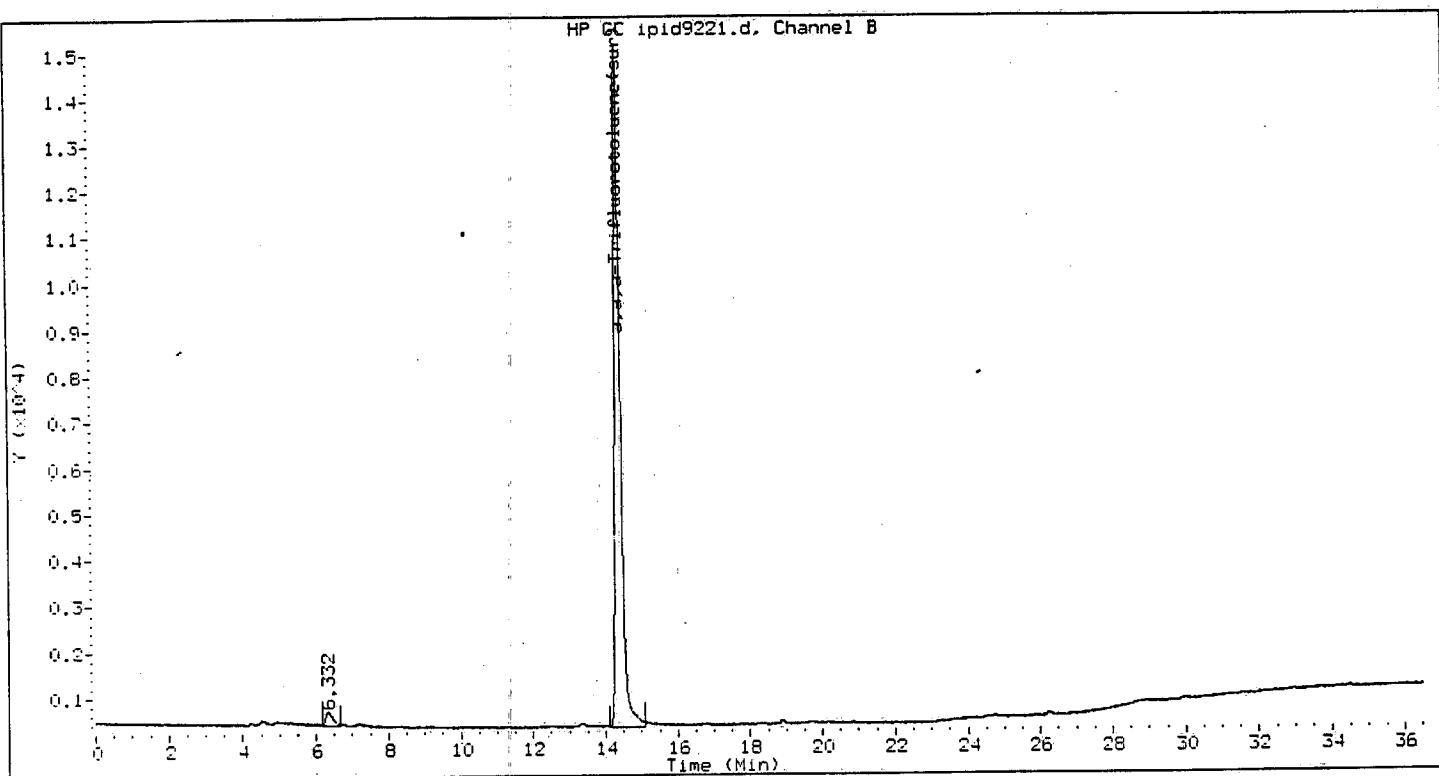
Lab Sample No: 238249  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9221.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection Limit</u> <u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

Sample Info : 238249

Lab ID : 238249

Inj Date : 01-NOV-2000 19:57

Operator : SP

Cpnd Sublist: btex

Inst ID : VOAGC3.i

Dil Factor : 1

Sample Matrix : WATER

Sample Type: SAMPLE

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
a,a,a-Trifluorotoluene(sur)	14.388	14.385	0.003	814296	29.226	29.226

Client ID: MW-15I  
Site: L.E. Carpenter

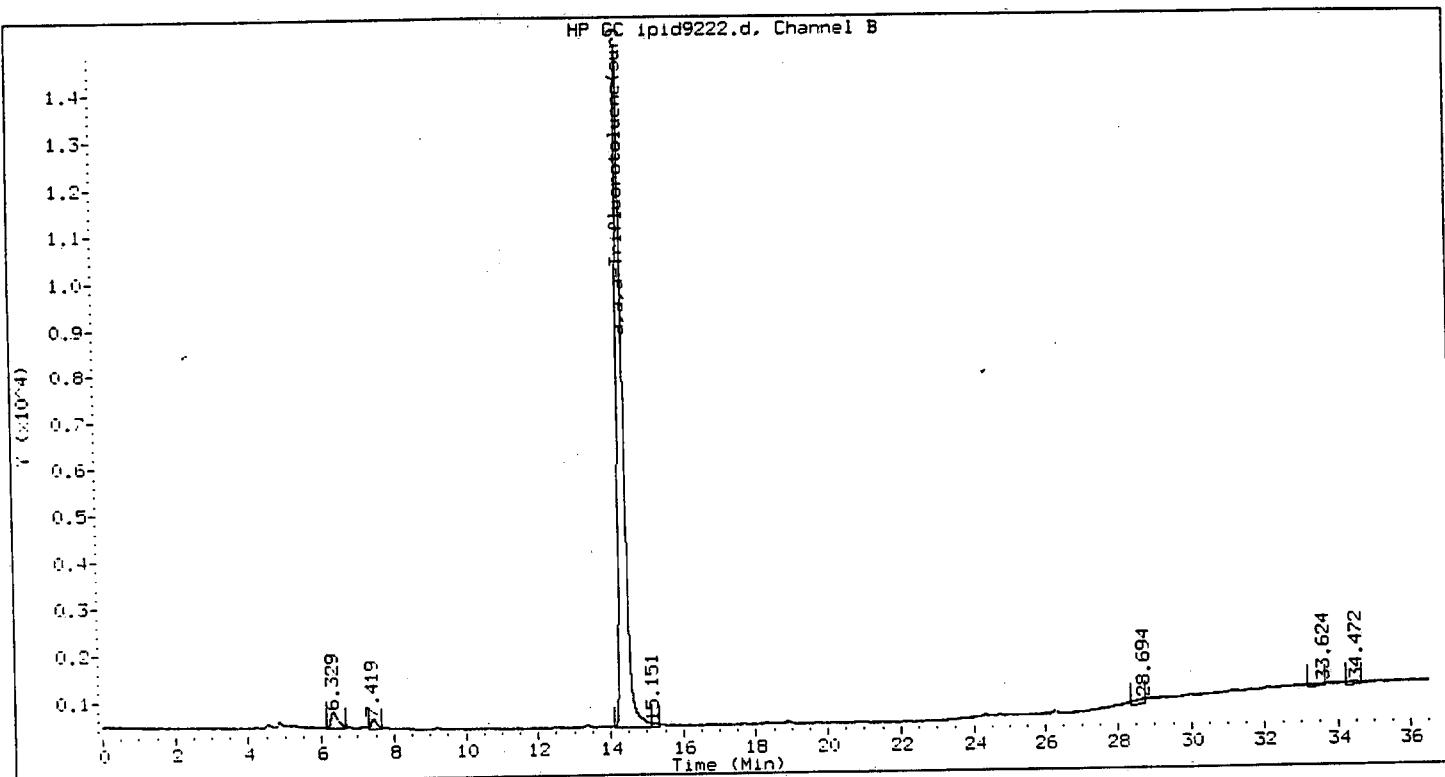
Lab Sample No: 238250  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9222.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

Sample Info : 238250

Lab ID : 238250

Inj Date : 01-NOV-2000 20:37

Operator : SP

Cpnd Sublist: btex

Inst ID : VOAGC3.i

Dil Factor : 1

Sample Matrix : WATER

Sample Type: SAMPLE

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
a, a, a-Trifluorotoluene(sur)	14.393	14.385	0.009	807311	28.975	28.975

Client ID: MW-11D  
Site: L.E. Carpenter

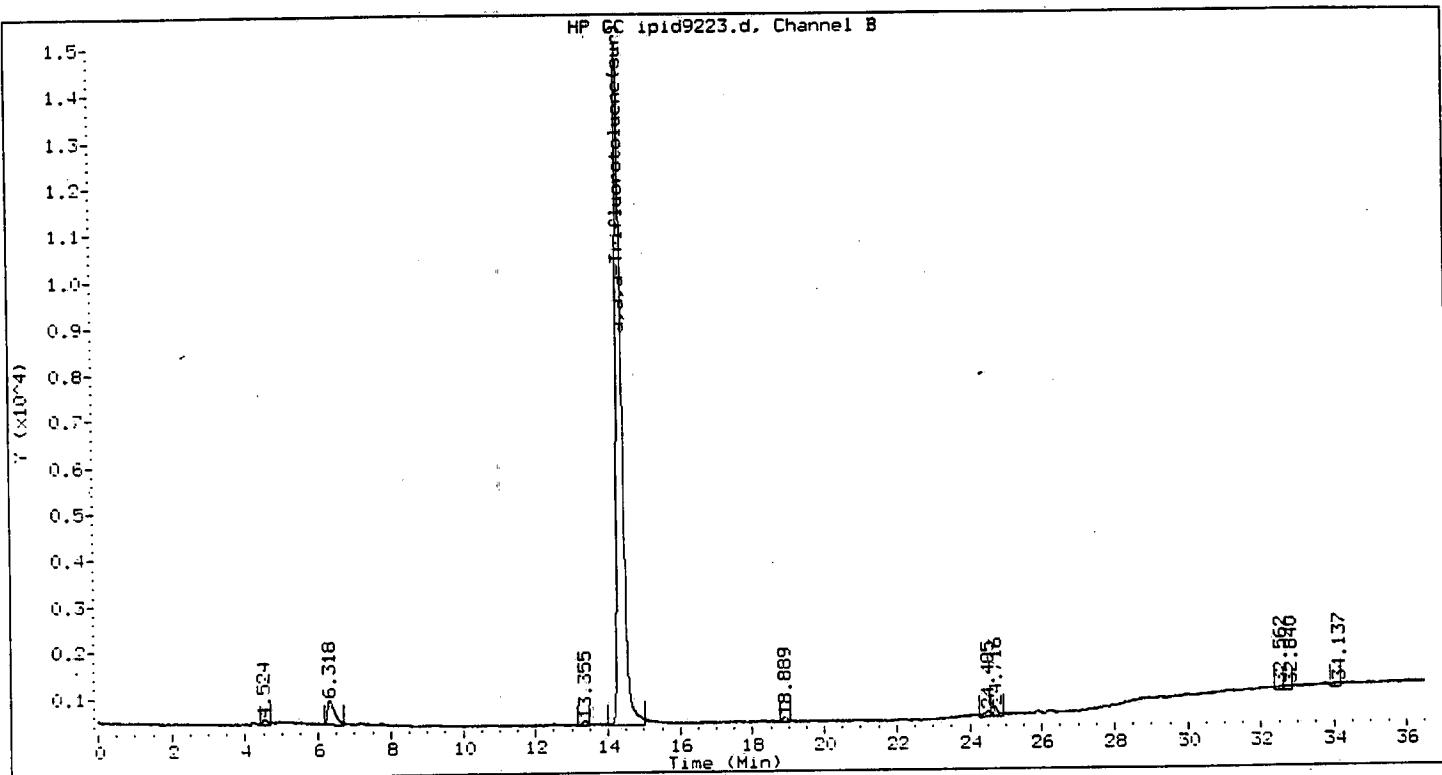
Lab Sample No: 238251  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9223.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection</u> <u>Limit</u> <u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

Sample Info : 238251

Lab ID : 238251

Inj Date : 01-NOV-2000 21:17

Operator : SP

Cpnd Sublist: btex

Inst ID : VOAGC3.i

Dil Factor : 1

Sample Matrix : WATER

Sample Type: SAMPLE

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
a,a,a-Trifluorotoluene(sur)	14.389	14.385	0.004	804010	28.857	28.857

Client ID: MW-4  
Site: L.E. Carpenter

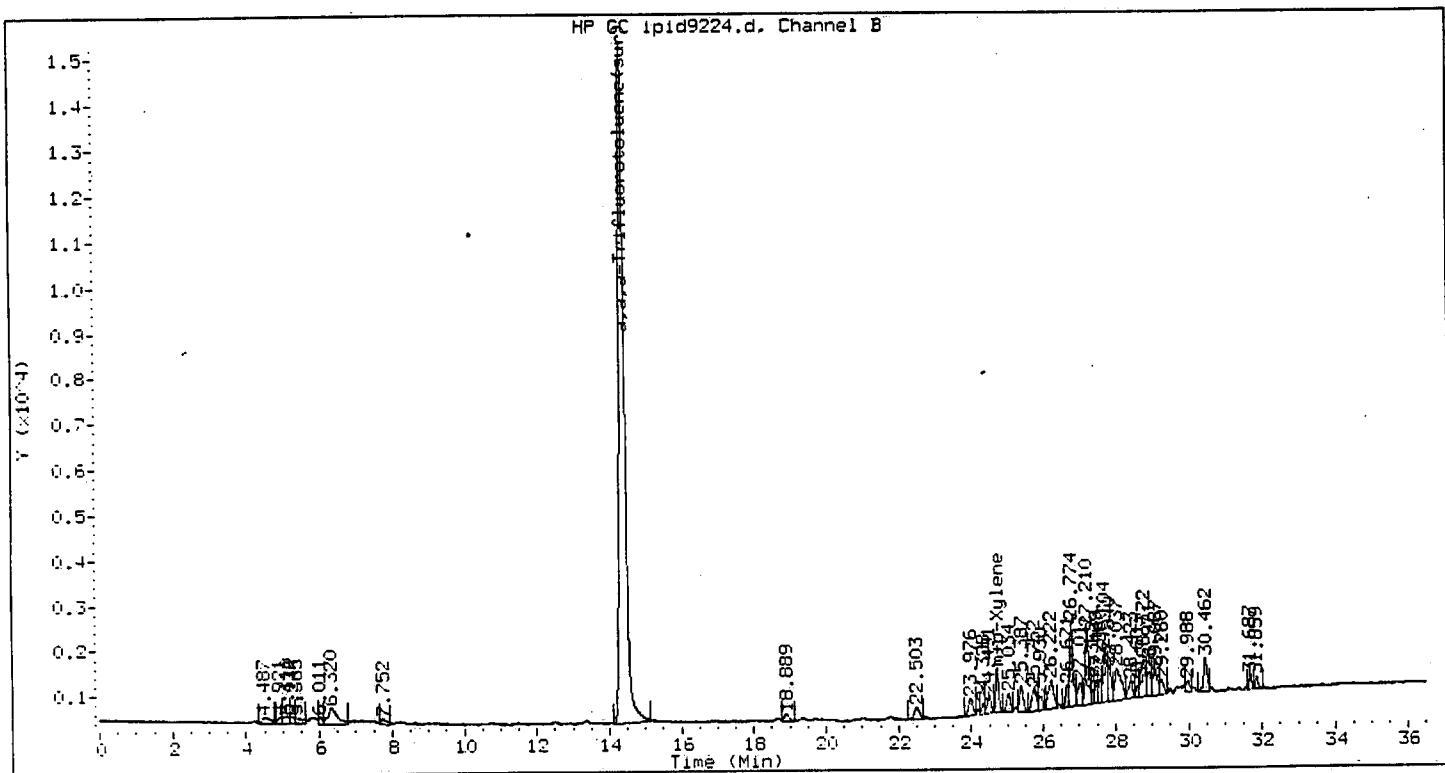
Lab Sample No: 238252  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9224.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	0.41	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

Sample Info : 238252

Lab ID : 238252

Inj Date : 01-NOV-2000 21:57

Operator : SP

operator : gr  
Cnd Sublist: btex

Inst ID : VOAGC3.i

Dil Factor : 1

Sample Matrix : WATER

Sample Matrix : WAT

## CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
m+p-Xylene	24.715	24.712	0.003	27953	0.392	0.392
Xylene (Total)	25.019	25.019	0.000	27953	0.406	0.406
a,a,a-Trifluorotoluene(sur)	14.390	14.385	0.005	809948	29.070	29.070

Client ID: MW-17S  
Site: L.E. Carpenter

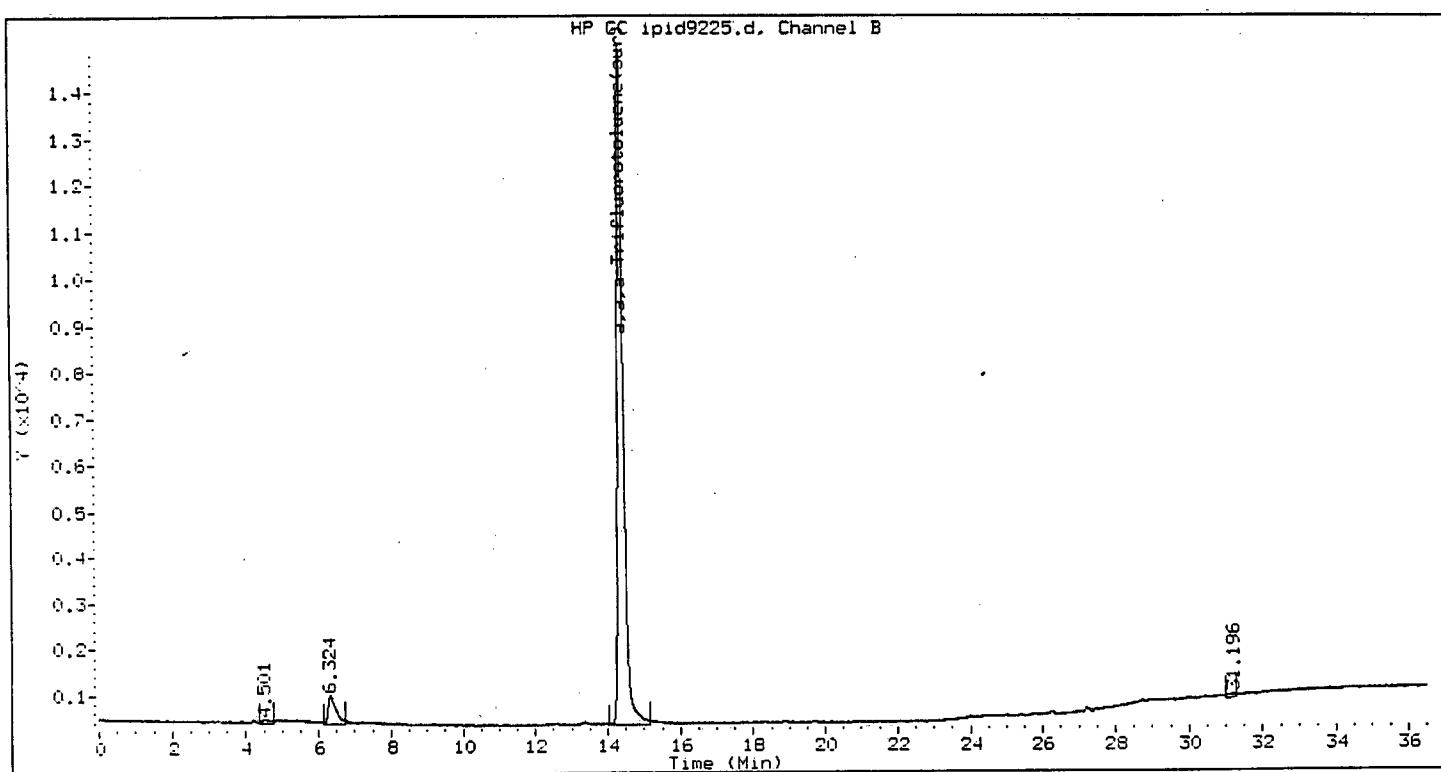
Lab Sample No: 238253  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9225.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

Sample Info : 238253

Lab ID : 238253

Inj Date : 01-NOV-2000 22:37

Operator : SP

Cpnd Sublist: btex

Inst ID : VOAGC3.i

Dil Factor : 1

Sample Matrix : WATER

Sample Type: SAMPLE

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
a,a,a-Trifluorotoluene(sur)	14.397	14.385	0.012	810445	29.088	29.088

Client ID: MW-22R  
Site: L.E. Carpenter

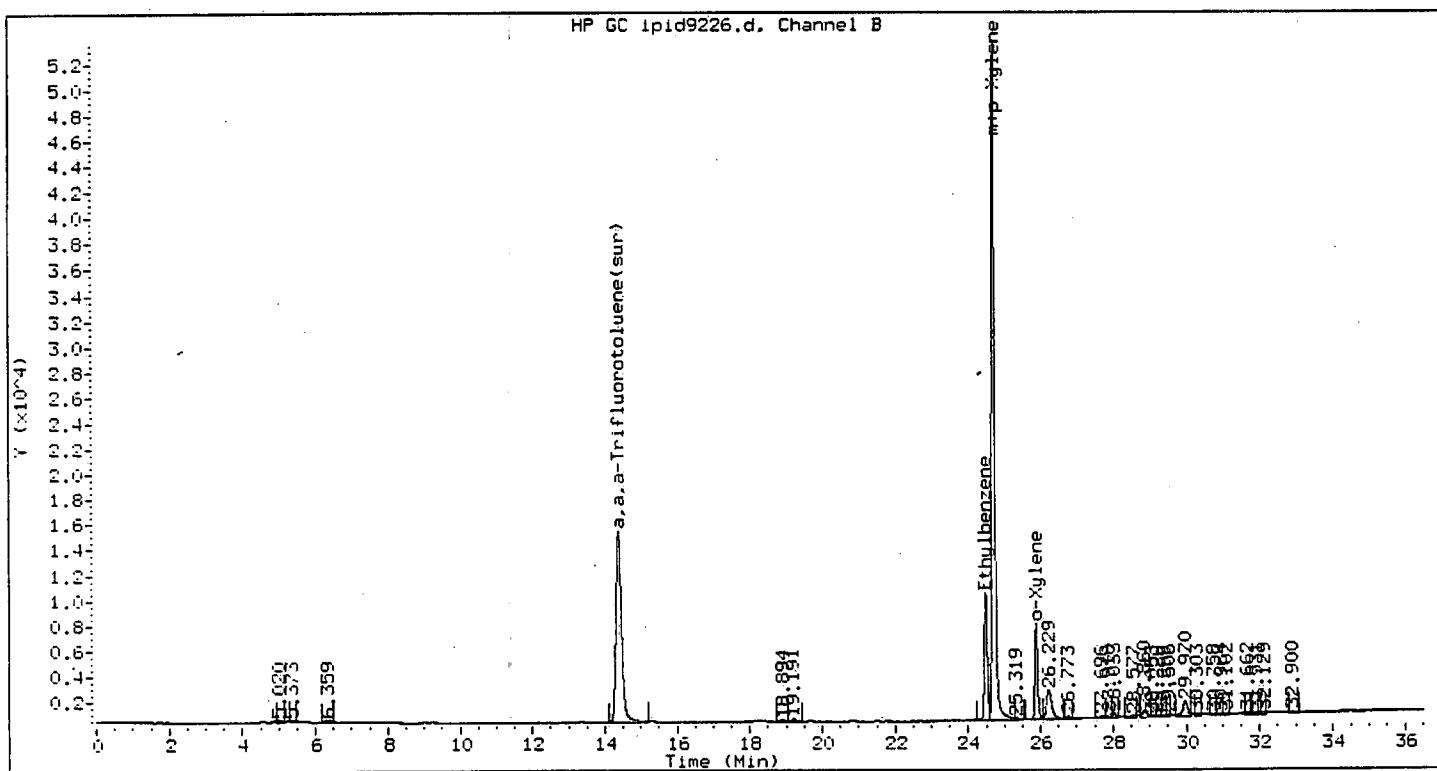
Lab Sample No: 238254  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9226.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 250.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	62
Toluene	ND	68
Ethylbenzene	1200	68
Xylene (Total)	6200	62



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

Sample Info : 238254;;250

Lab ID : 238254

Inj Date : 01-NOV-2000 23:17

Operator : SP

Cpnd Sublist: btex

Inst ID : VOAGC3.i

Dil Factor : 250

Sample Matrix : WATER

Sample Type: SAMPLE

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
m+p-Xylene	24.715	24.712	0.004	1509272	21.155	5288.648
o-Xylene	25.884	25.883	0.000	191626	3.011	752.686
Ethylbenzene	24.489	24.488	0.001	280691	4.608	1151.938
Xylene (Total)	25.019	25.019	0.000	1700898	24.730	6182.472
a,a,a-Trifluorotoluene(sur)	14.390	14.385	0.005	820778	29.459	29.459

Client ID: MW-25R  
Site: L.E. Carpenter

Lab Sample No: 238255  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9229.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

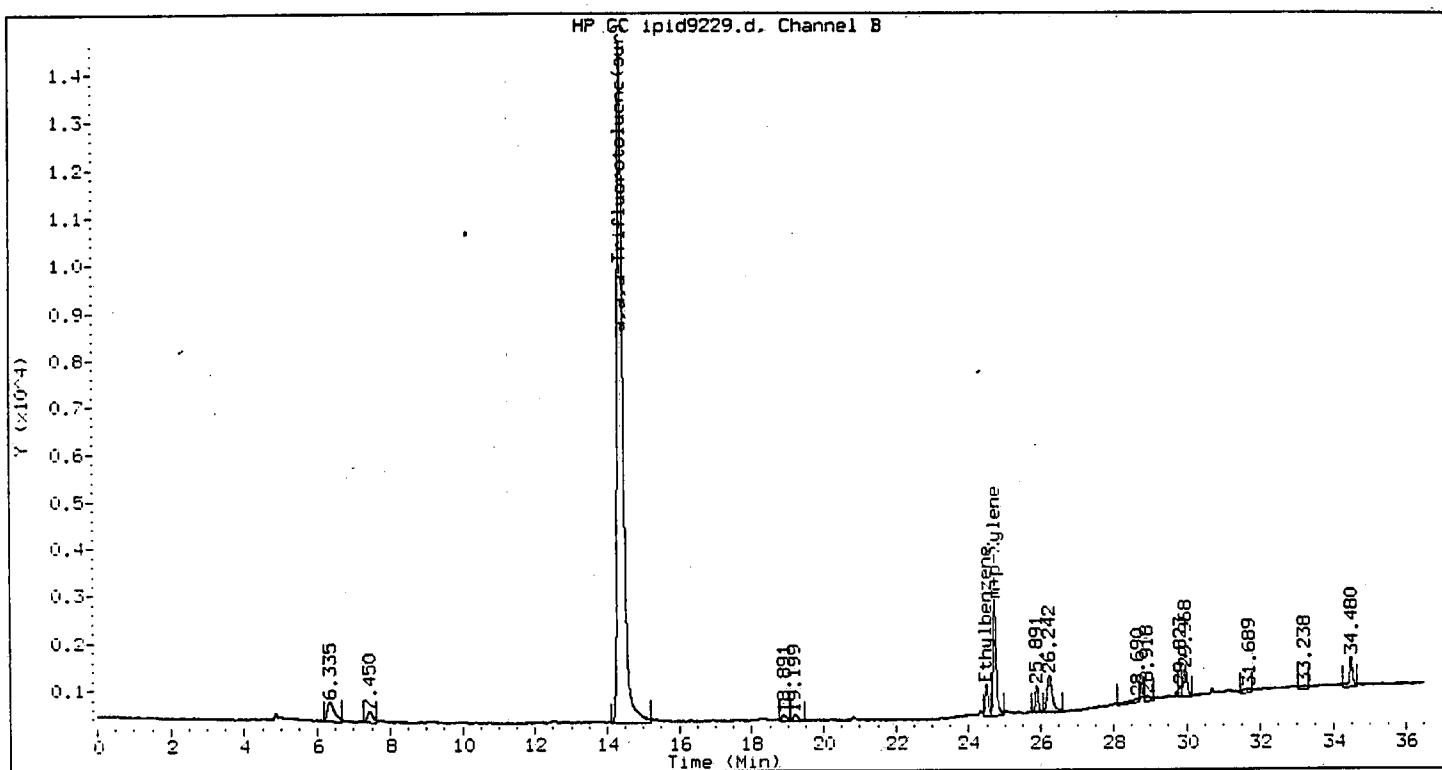
VOLATILE ORGANICS - GC/PID  
METHOD 602

Parameter

Analytical Result  
Units: ug/l

Method Detection  
Limit  
Units: ug/l

Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	0.33	0.27
Xylene (Total)	1.1	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m  
Sample Info : 238255  
Lab ID : 238255  
Inj Date : 02-NOV-2000 01:17  
Operator : SP  
Cpnd Sublist: btex

Inst ID : VOAGC3.i  
Dil Factor : 1  
Sample Matrix : WATER  
Sample Type: SAMPLE

Compounds	CONCENTRATIONS					
	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	ON-COLUMN FINAL
m+p-Xylene	24.722	24.712	0.010	74046	1.038	1.038
Ethylbenzene	24.494	24.488	0.006	20167	0.331	0.331
Xylene (Total)	25.019	25.019	0.000	74046	1.077	1.077
a,a,a-Trifluorotoluene(sur)	14.397	14.385	0.012	787772	28.274	28.274

Client ID: MW-14I  
Site: L.E. Carpenter

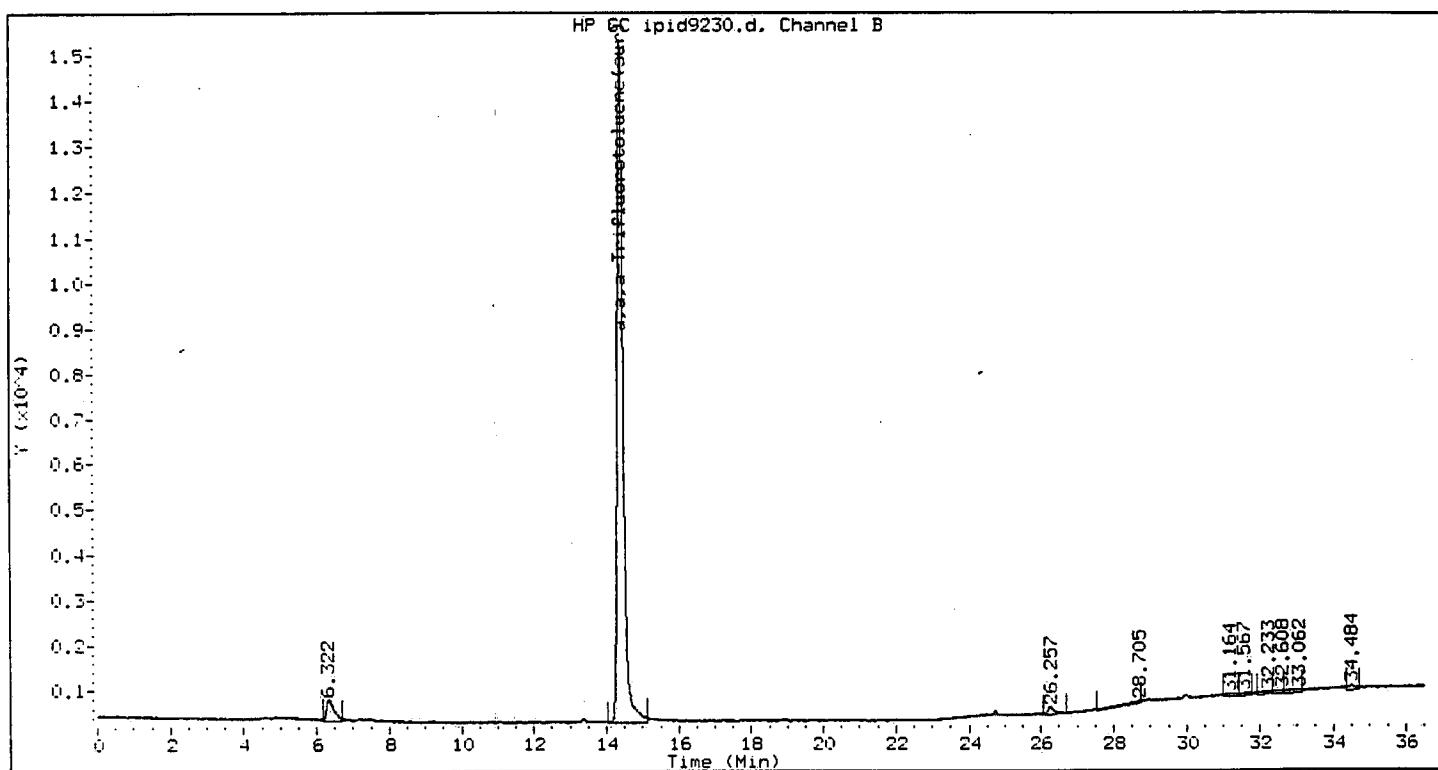
Lab Sample No: 238256  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9230.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

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Sample Info : 238256

Inst ID : VOAGC3.i

Lab ID : 238256

Dil Factor : 1

Inj Date : 02-NOV-2000 01:58

Sample Matrix : WATER

Operator : SP

Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	CONCENTRATIONS	
				ON-COLUMN	FINAL
a,a,a-Trifluorotoluene(sur)	14.399	14.385	0.014	821896	29.499

Client ID: MW-21  
Site: L.E. Carpenter

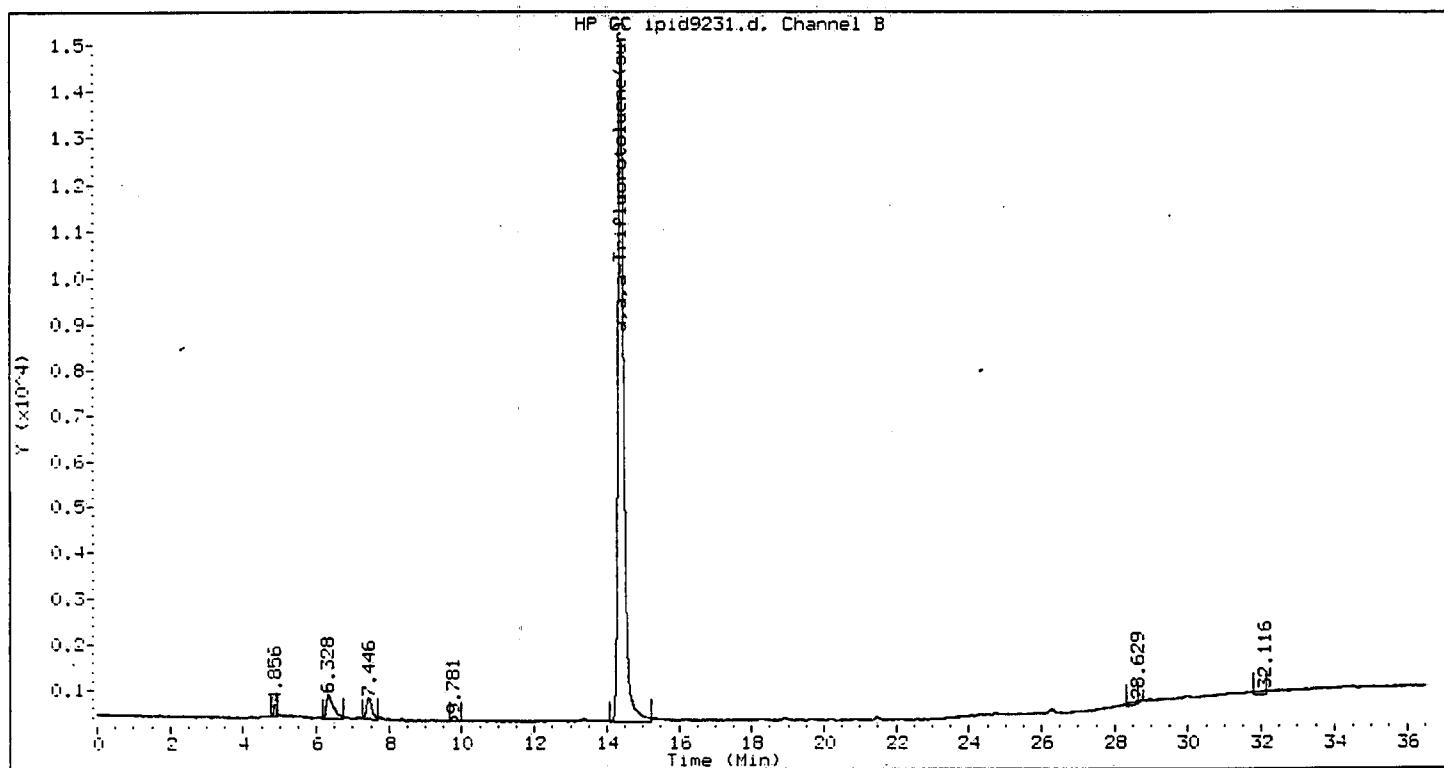
Lab Sample No: 238257  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9231.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

48

Sample Info : 238257

Inst ID : VOAGC3.i

Lab ID : 238257

Dil Factor : 1

Inj Date : 02-NOV-2000 02:38

Sample Matrix : WATER

Operator : SP

Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	CONCENTRATIONS	
				ON-COLUMN (ug/L)	FINAL (ug/L)
a,a,a-Trifluorotoluene(sur)	14.403	14.385	0.019	823393	29.553

Client ID: MW-4D  
Site: L.E. Carpenter

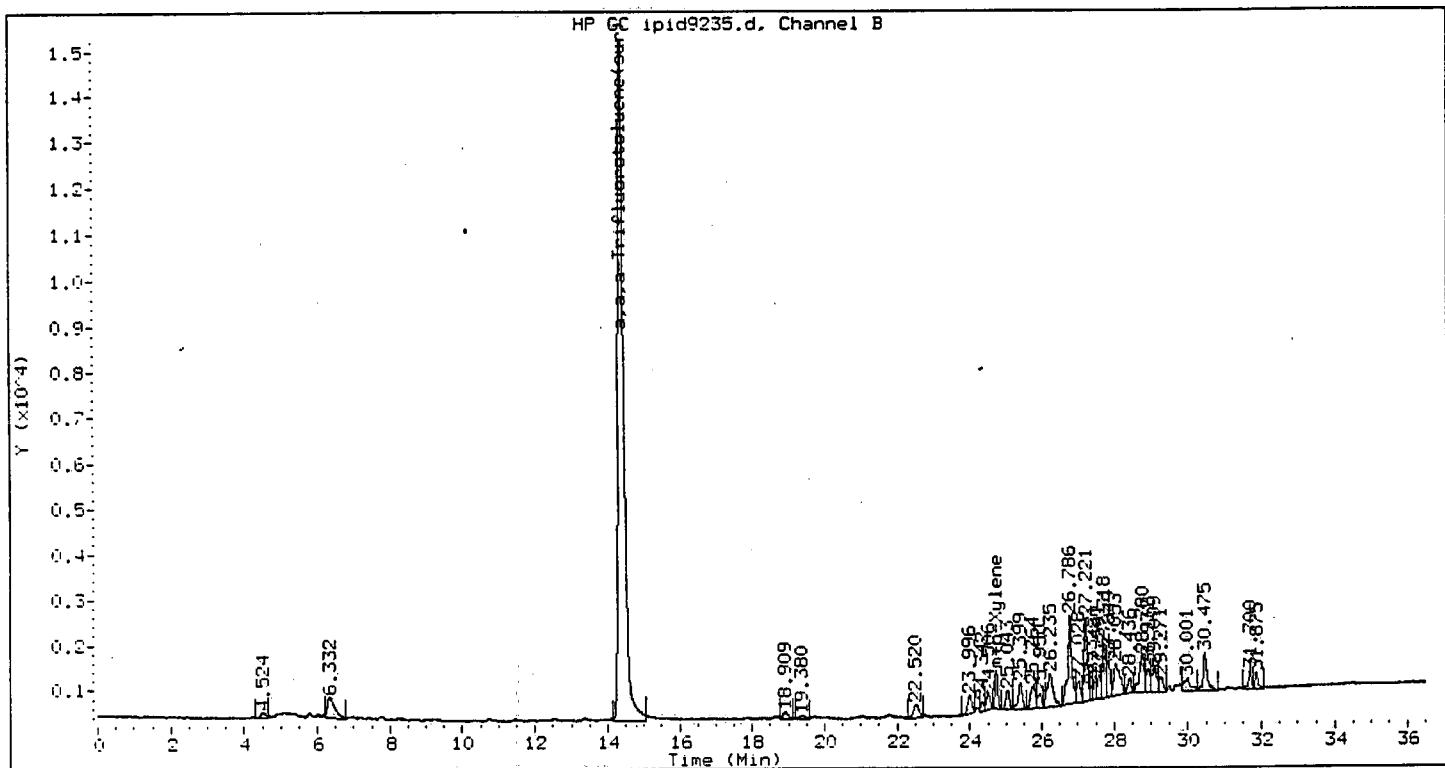
Lab Sample No: 238258  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9235.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	0.33	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m  
Sample Info : 238258  
Lab ID : 238258  
Inj Date : 02-NOV-2000 05:18  
Operator : SP  
Cpnd Sublist: btex

Inst ID : VOAGC3.i  
Dil Factor : 1  
Sample Matrix : WATER  
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
m+p-Xylene	24.728	24.712	0.016	22835	0.320	0.320
Xylene (Total)	25.019	25.019	0.000	22835	0.332	0.332
a,a,a-Trifluorotoluene(sur)	14.408	14.385	0.024	816134	29.292	29.292

Client ID: **Field\_Blank**  
Site: L.E. Carpenter

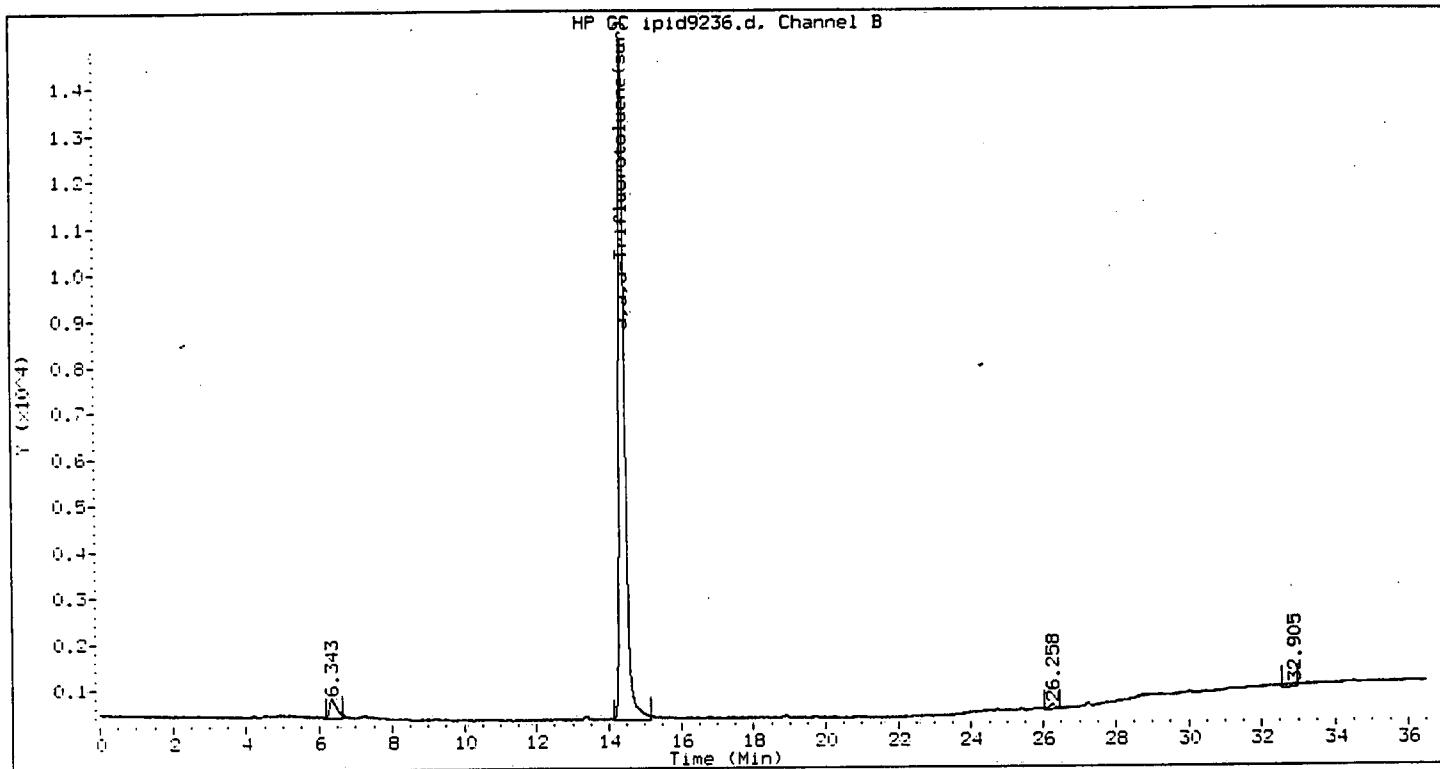
Lab Sample No: **238259**  
Lab Job No: **F165**

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9236.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID**  
**METHOD 602**

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m  
Sample Info : 238259  
Lab ID : 238259  
Inj Date : 02-NOV-2000 05:58  
Operator : SP  
Cpnd Sublist: btex

Inst ID : VOAGC3.i  
Dil Factor : 1  
Sample Matrix : WATER  
Sample Type: SAMPLE

Compounds	CONCENTRATIONS					
	ON-COLUMN			FINAL		
a,a,a-Trifluorotoluene(sur)	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
a,a,a-Trifluorotoluene(sur)	14.413	14.385	0.028	813016	29.180	29.180

Client ID: Trip\_Blank  
Site: L.E. Carpenter

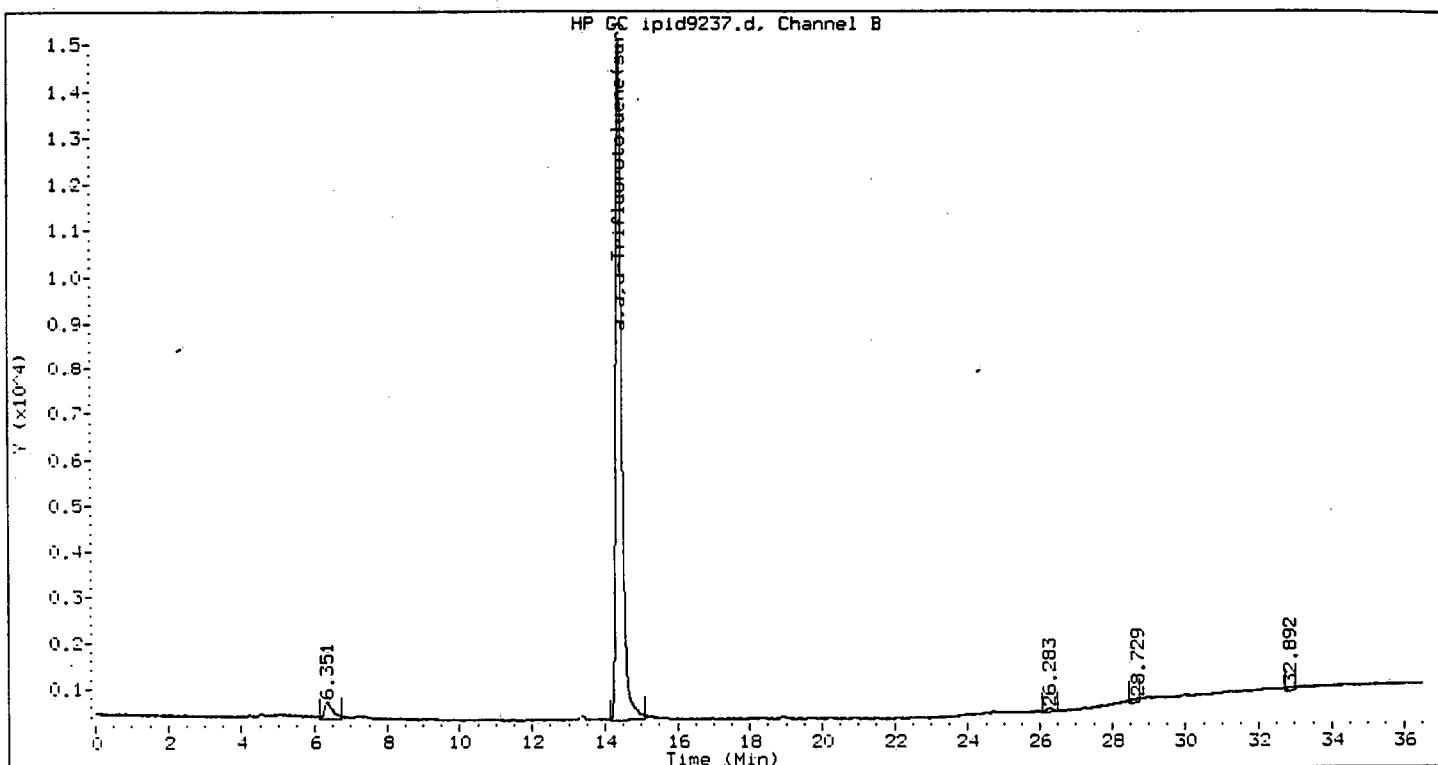
Lab Sample No: 238260  
Lab Job No: F165

Date Sampled: 10/30/00  
Date Received: 10/30/00  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9237.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u>	<u>Method Detection Limit</u>
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	0.25
Toluene	ND	0.27
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

Sample Info : 238260

Lab ID : 238260

Inj Date : 02-NOV-2000 06:38

Operator : SP

Cpnd Sublist: btex

Inst ID : VOAGC3.i

Dil Factor : 1

Sample Matrix : WATER

Sample Type: SAMPLE

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
a, a, a-Trifluorotoluene(sur)	14.414	14.385	0.029	816863	29.318	29.318

## VOLATILE METHOD BLANK SUMMARY

IG306

Date Analyzed: 11/01/00

Instrument ID: VOAGC3

Time Analyzed: 1149

Lab File ID: IPID9209

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	TIME ANALYZED
01 MW-15S	238249	IPID9221	1957
02 MW-15I	238250	IPID9222	2037
03 MW-11D	238251	IPID9223	2117
04 MW-4	238252	IPID9224	2157
05 MW-17S	238253	IPID9225	2237
06 MW-22R	238254	IPID9226	2317
07 MW-22RMS	238254MS	IPID9227	2357
08 MW-22RMSD	238254MSD	IPID9228	0037
09 MW-25R	238255	IPID9229	0117
10 MW-14I	238256	IPID9230	0158
11 MW-21	238257	IPID9231	0238
12			
13			
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29			
30			

COMMENTS:

Client ID: IG306  
Site:

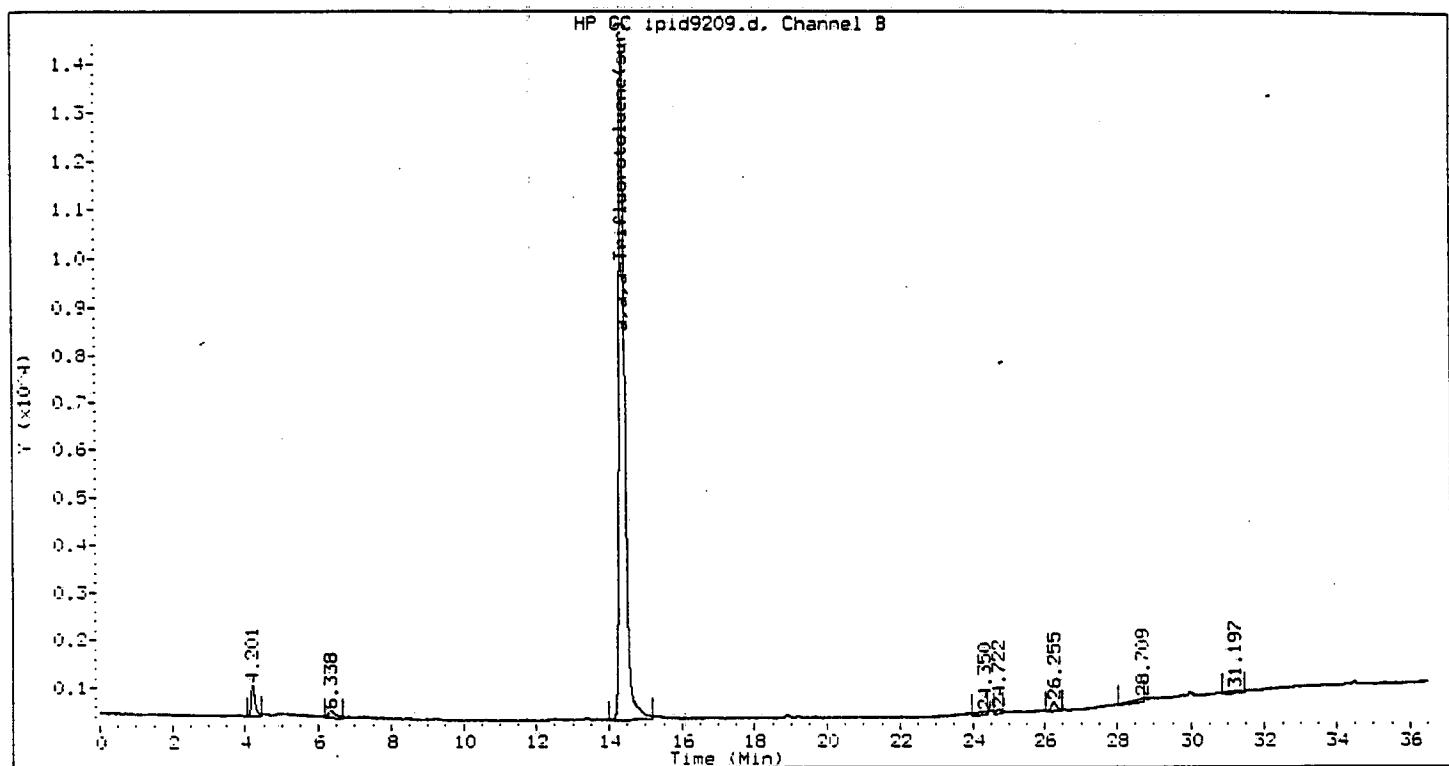
Lab Sample No: IG306  
Lab Job No: F165

Date Sampled: \_\_\_\_\_  
Date Received: \_\_\_\_\_  
Date Analyzed: 11/01/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9209.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 mL  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/PID  
METHOD 602

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection</u> <u>Limit</u> <u>Units: ug/l</u>
TBA	ND	20
MTBE	ND	0.24
DIPE	ND	0.28
Benzene	ND	0.25
Toluene	ND	0.27
Chlorobenzene	ND	0.25
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25
1,3-Dichlorobenzene	ND	0.25
1,4-Dichlorobenzene	ND	0.26
1,2-Dichlorobenzene	ND	0.25
Naphthalene	ND	0.16



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m  
Sample Info : IG306  
Lab ID : IG306 Inst ID : VOAGC3.i  
Inj Date : 01-NOV-2000 11:49 Dil Factor : 1  
Operator : SP Sample Matrix : WATER  
Cpnd Sublist: all Sample Type: BLANK

Compounds	RT	EXP RT	DLT RT	CONCENTRATIONS	
				ON-COLUMN	FINAL
a,a,a-Trifluorotoluene(sur)	14.395	14.385	0.010	774011	27.780

LAB SAMPLE NO.

VOLATILE METHOD BLANK SUMMARY

IG306A

Date Analyzed: 11/02/00

Instrument ID: VOAGC3

Time Analyzed: 0438

Lab File ID: IPID9234

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	TIME ANALYZED
01 MW-4D	238258	IPID9235	0518
02 FIELD_BLANK	238259	IPID9236	0558
03 TRIP_BLANK	238260	IPID9237	0638
04			
05			
06			
07			
08			
09			
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29			
30			

COMMENTS:

Client ID: IG306A  
Site:

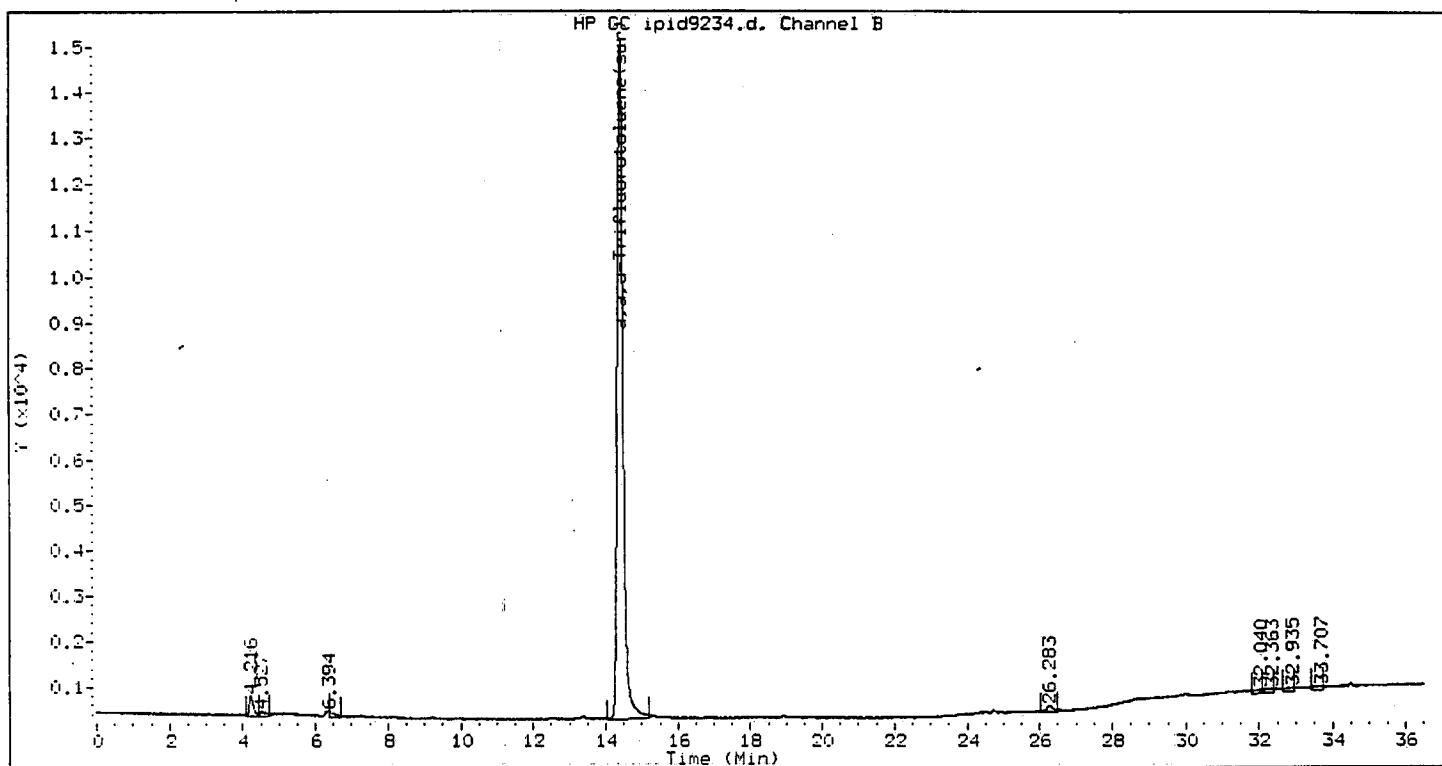
Lab Sample No: IG306A  
Lab Job No: F165

Date Sampled: \_\_\_\_\_  
Date Received: \_\_\_\_\_  
Date Analyzed: 11/02/00  
GC Column: DB624  
Instrument ID: VOAGC3.i  
Lab File ID: ipid9234.d

Matrix: WATER  
Level: LOW  
Purge Volume: 5.0 ml  
Final Volume: 0.0 mL  
Dilution Factor: 1.0

**VOLATILE ORGANICS - GC/PID  
METHOD 602**

<u>Parameter</u>	<u>Analytical Result</u> <u>Units: ug/l</u>	<u>Method Detection Limit</u> <u>Units: ug/l</u>
TBA	ND	20
MTBE	ND	0.24
DIPE	ND	0.28
Benzene	ND	0.25
Toluene	ND	0.27
Chlorobenzene	ND	0.25
Ethylbenzene	ND	0.27
Xylene (Total)	ND	0.25
1,3-Dichlorobenzene	ND	0.25
1,4-Dichlorobenzene	ND	0.26
1,2-Dichlorobenzene	ND	0.25
Naphthalene	ND	0.16



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

Sample Info : IG306A

Lab ID : IG306A

Inj Date : 02-NOV-2000 04:38

Inst ID : VOAGC3.i

Operator : SP

Dil Factor : 1

Cpnd Sublist: all

Sample Matrix : WATER

Sample Type: BLANK

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
a, a, a-Trifluorotoluene(sur)	14.411	14.385	0.026	819742	29.422	29.422

## VOLATILE ORGANICS INITIAL CALIBRATION DATA

Instrument ID: VOAGC3

Calibration Date(s): 10/03/00 10/03/00

Calibration Time(s): 0822 1158

LAB FILE ID:	RRF2: IPID8855 RRF20: IPID8853		RRF5: IPID8851 RRF40: IPID8854		RRF10: IPID8852
COMPOUND	RRF2	RRF5	RRF10	RRF20	RRF40
TBA **	264	269	278	263	
MTBE	30350	25807	27694	27404	25688
DIPE	39862	37143	39074	39469	38514
Benzene	85161	79651	82074	81451	81318
Toluene	84460	72076	74343	73762	73530
Chlorobenzene	85334	77949	80650	80177	80582
Ethylbenzene	65418	58966	60759	59707	59735
Xylene (Total)	74261	67213	68356	67087	66978
1,3-Dichlorobenzene	50476	49540	49947	48777	48309
1,4-Dichlorobenzene	62758	55659	54082	55962	52941
1,2-Dichlorobenzene	39496	39236	39027	38589	38118
Naphthalene	37791	27104	26317	26275	26501
a,a,a-Trifluorotoluene(sur)	27103	27994	27581	28365	28266

\*\* TBA Calibration Levels are RF200, RF400, RF1000, and RF2000

## VOLATILE ORGANICS INITIAL CALIBRATION DATA

Instrument ID: VOAGC3

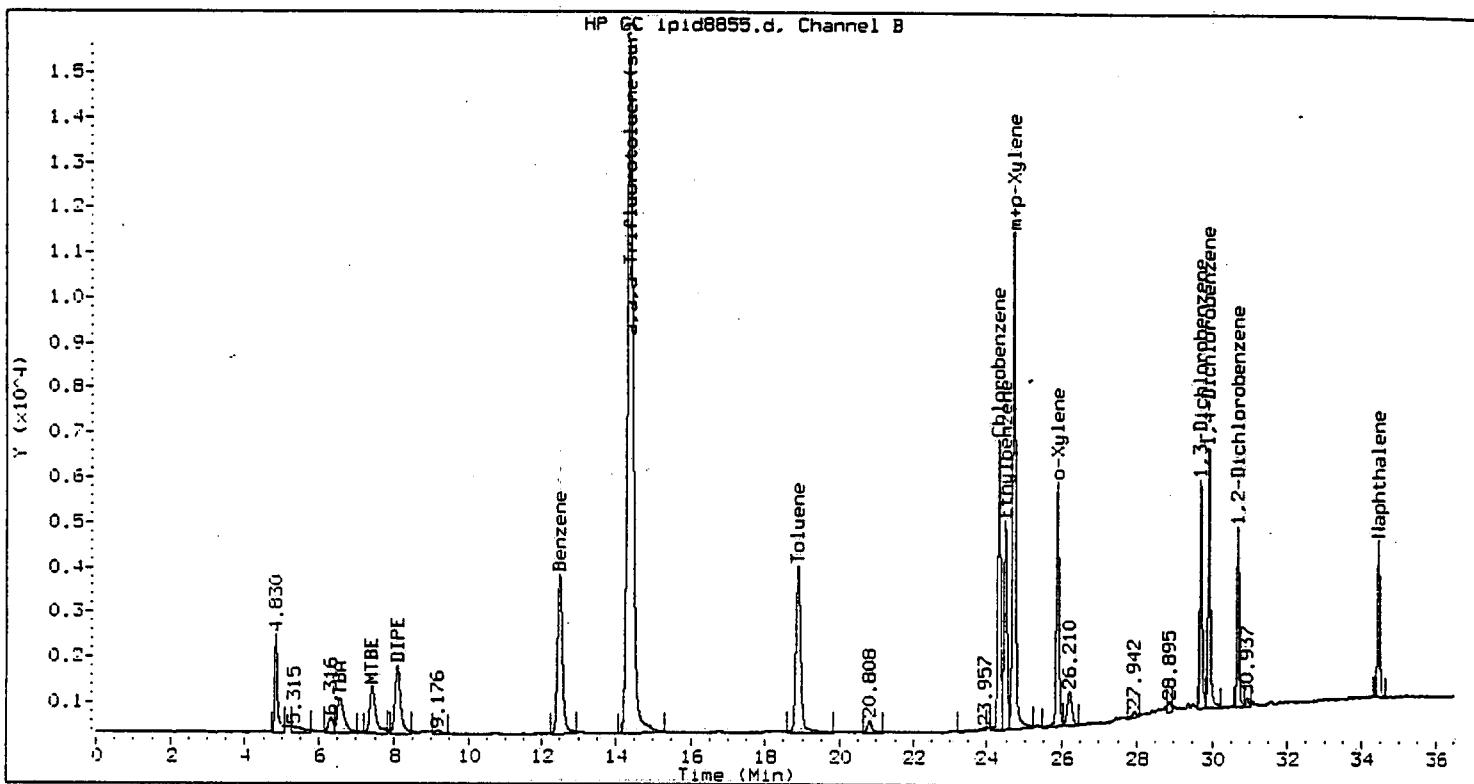
Calibration Date(s) : 10/03/00 10/03/00

Calibration Time(s) : 0822 1158

COMPOUND	CURVE	COEFFICIENT A1	%RSD OR R^2
TBA **	AVRG	269	2.5*
MTBE	AVRG	27388	6.9*
DIPE	AVRG	38812	2.7*
Benzene	AVRG	81931	2.5*
Toluene	AVRG	75634	6.6*
Chlorobenzene	AVRG	80938	3.3*
Ethylbenzene	AVRG	60917	4.3*
Xylene (Total)	AVRG	68779	4.5*
1,3-Dichlorobenzene	AVRG	49410	1.8*
1,4-Dichlorobenzene	AVRG	56280	6.8*
1,2-Dichlorobenzene	AVRG	38893	1.4*
Naphthalene	AVRG	28798	17*
a,a,a-Trifluorotoluene (sur)	AVRG	27862	1.9*

\*\* TBA Calibration Levels are RF200, RF400, RF1000, and RF2000

\* Compounds with required maximum %RSD values.



Method : /chem/VOAGC3.i/602/10-03-00/03OCT00.b/602\_00.m

Sample Info : ISTD002

Lab ID : ISTD002

Inj Date : 03-OCT-2000 11:58

Operator : SP

Cpnd Sublist: all

Inst ID : VOAGC3.i

Dil Factor : 1

Sample Matrix : WATER

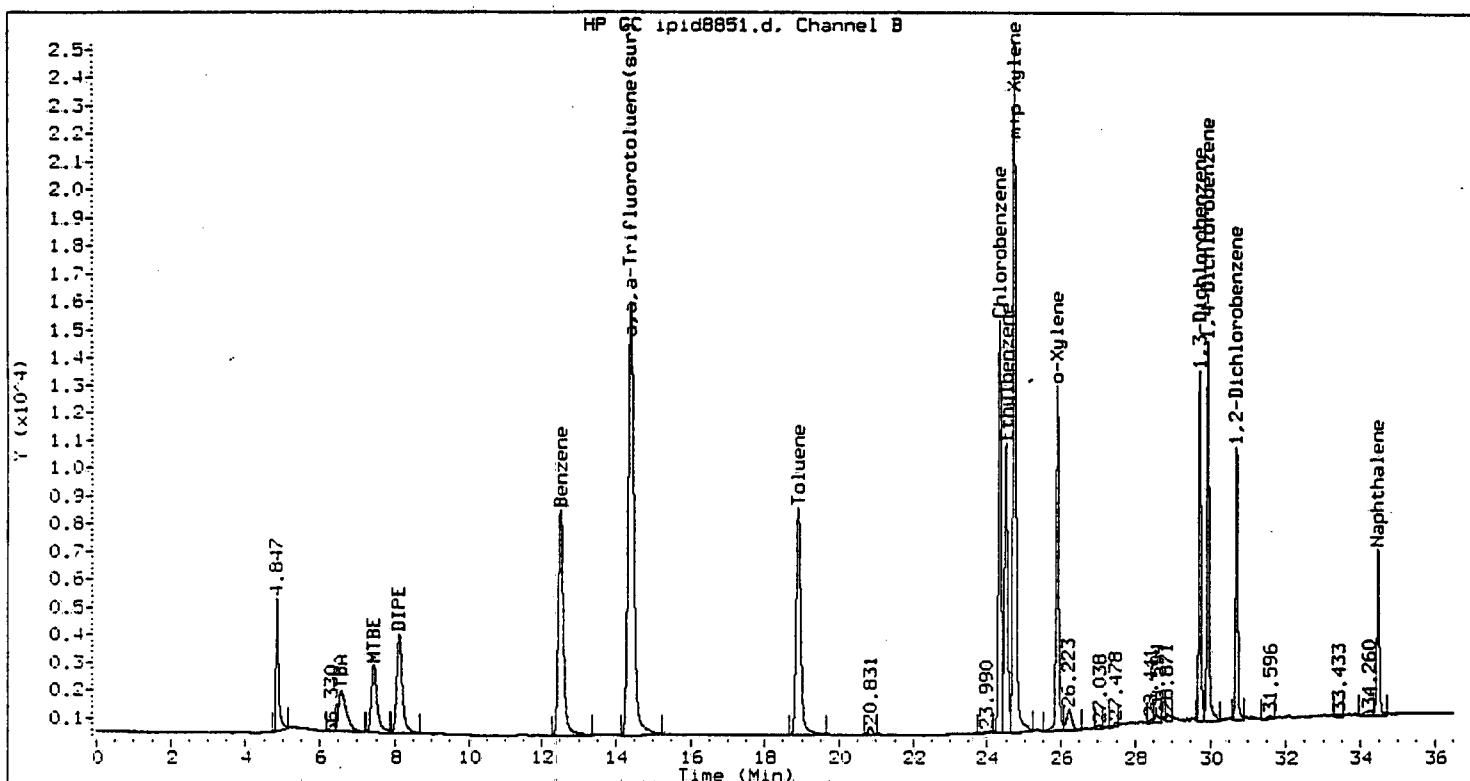
Sample Type: CALIB\_1

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
o-Xylene	25.881	25.884	0.003	136728	2.148	2.148
m+p-Xylene	24.709	24.712	0.003	308837	4.329	4.329
TBA	6.558	6.559	0.001	52770	196.443	196.443
MTBE	7.424	7.424	0.000	60699	2.216	2.216
DIPB	8.103	8.106	0.002	79725	2.054	2.054
Benzene	12.494	12.497	0.003	170322	2.079	2.079
Toluene	18.885	18.888	0.004	168919	2.233	2.233
Chlorobenzene	24.320	24.323	0.003	170669	2.109	2.109
Ethylbenzene	24.486	24.489	0.003	130837	2.148	2.148

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	445565	6.478	6.478
1,3-Dichlorobenzene	29.714	29.717	0.004	100951	2.043	2.043
1,4-Dichlorobenzene	29.928	29.931	0.003	125516	2.230	2.230
1,2-Dichlorobenzene	30.686	30.690	0.004	78993	2.031	2.031
Naphthalene	34.458	34.464	0.005	75582	2.625	2.625
a, a, a-Trifluorotoluene(sur)	14.383	14.385	0.002	813090	29.183	29.183



Method : /chem/VOAGC3.i/602/10-03-00/03OCT00.b/602\_00.m

Sample Info : ISTD005

Lab ID : ISTD005

Inj Date : 03-OCT-2000 09:02

Operator : SP

Cpnd Sublist: all

Inst ID : VOAGC3.i

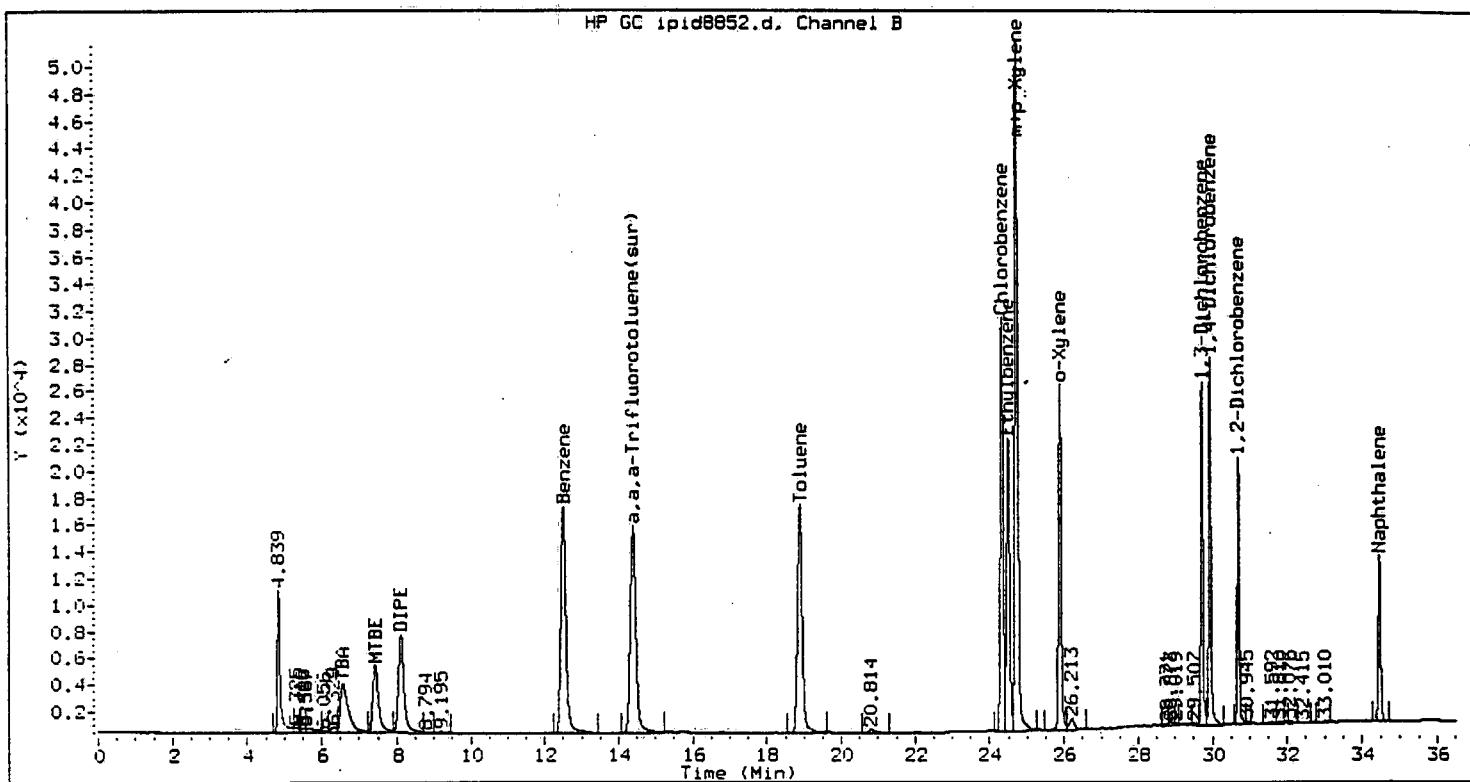
Dil Factor : 1

Sample Matrix : WATER

Sample Type: CALIB\_2

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					(ug/L)	(ug/L)
o-Xylene	25.895	25.884	0.010	313950	4.933	4.933
m+p-Xylene	24.724	24.712	0.012	694246	9.731	9.731
TBA	6.571	6.559	0.012	107793	401.273	401.273
MTBE	7.439	7.424	0.015	129035	4.711	4.711
DIPE	8.121	8.106	0.016	185715	4.785	4.785
Benzene	12.517	12.497	0.020	398255	4.861	4.861
Toluene	18.906	18.888	0.018	360379	4.765	4.765
Chlorobenzene	24.335	24.323	0.012	389744	4.815	4.815
Ethylbenzene	24.501	24.489	0.012	294829	4.840	4.840

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	1008196	14.658	14.658
1,3-Dichlorobenzene	29.727	29.717	0.009	247701	5.013	5.013
1,4-Dichlorobenzene	29.941	29.931	0.009	278296	4.945	4.945
1,2-Dichlorobenzene	30.700	30.690	0.009	196182	5.044	5.044
Naphthalene	34.476	34.464	0.012	135522	4.706	4.706
a,a,a-Trifluorotoluene(sur)	14.406	14.385	0.020	839828	30.142	30.142



Method : /chem/VOAGC3.i/602/10-03-00/03OCT00.b/602\_00.m

Sample Info : ISTD010

Lab ID : ISTD010

Inst ID : VOAGC3.i

Inj Date : 03-OCT-2000 09:42

Dil Factor : 1

Operator : SP

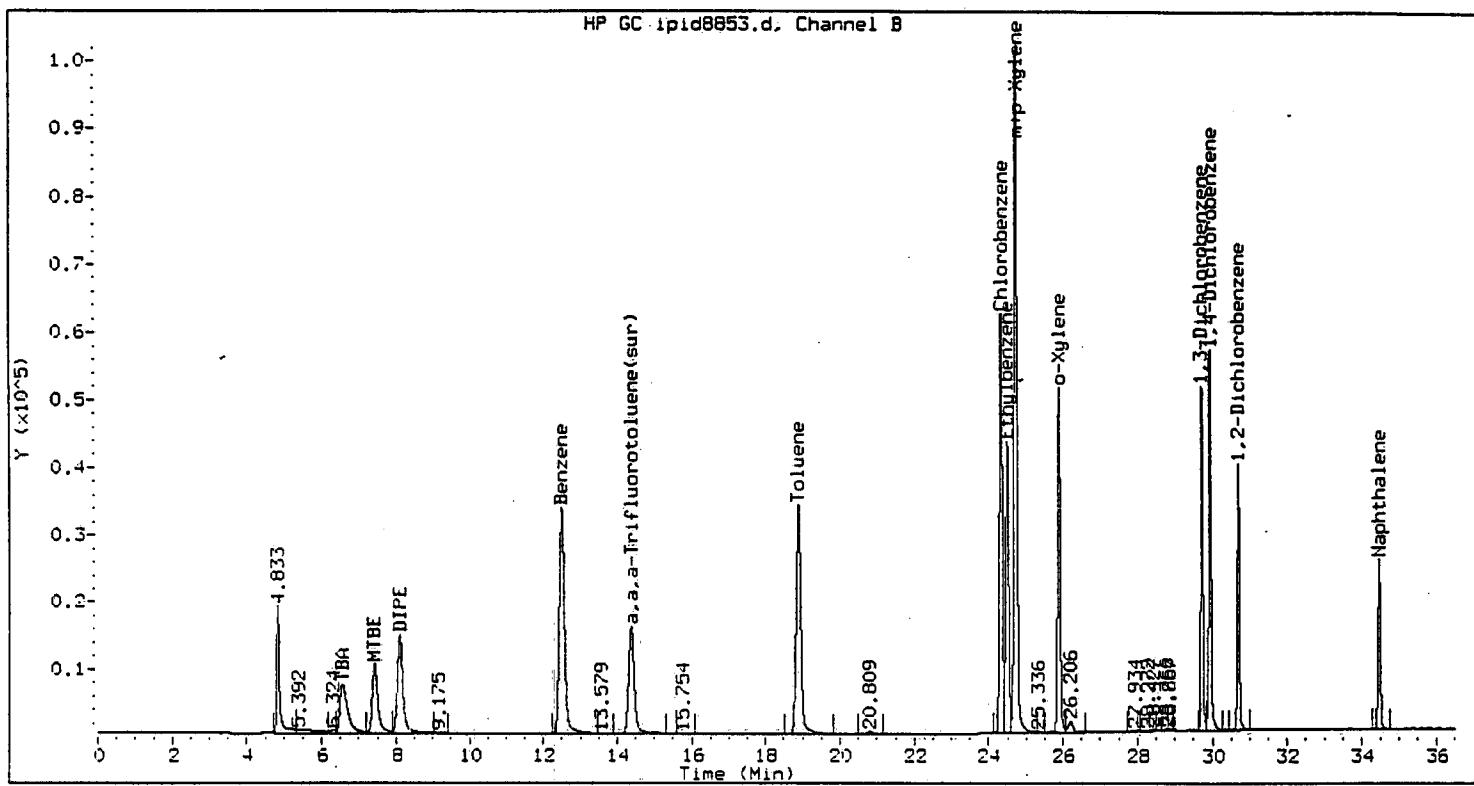
Sample Matrix : WATER

Cpnd Sublist: all

Sample Type: CALIB\_3

Compounds	RT	EXP RT	DLT RT	CONCENTRATIONS		
				ON-COLUMN	FINAL	( $\mu$ g/L)
o-Xylene	25.887	25.884	0.003	633578	9.955	9.955
m,p-Xylene	24.715	24.712	0.003	1417101	19.863	19.863
TBA	6.564	6.559	0.005	277795	1034.126	1034.126
MTBE	7.430	7.424	0.006	276941	10.112	10.112
DIPE	8.112	8.106	0.006	390735	10.067	10.067
Benzene	12.504	12.497	0.007	820743	10.017	10.017
Toluene	18.894	18.888	0.006	743431	9.829	9.829
Chlorobenzene	24.327	24.323	0.004	806501	9.964	9.964
Ethylbenzene	24.492	24.489	0.003	607590	9.974	9.974

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	2050679	29.815	29.815
1,3-Dichlorobenzene	29.721	29.717	0.003	499468	10.109	10.109
1,4-Dichlorobenzene	29.934	29.931	0.003	540823	9.609	9.609
1,2-Dichlorobenzene	30.693	30.690	0.003	390266	10.034	10.034
Naphthalene	34.468	34.464	0.004	263166	9.138	9.138
a,a,a-Trifluorotoluene(sur)	14.392	14.385	0.006	827427	29.697	29.697



Method : /chem/VOAGC3.i/602/10-03-00/03OCT00.b/602\_00.m

Sample Info : ISTD020

Lab ID : ISTD020

Inj Date : 03-OCT-2000 10:22

Operator : SP

Cpnd Sublist: all

Inst ID : VOAGC3.i

Dil Factor : 1

Sample Matrix : WATER

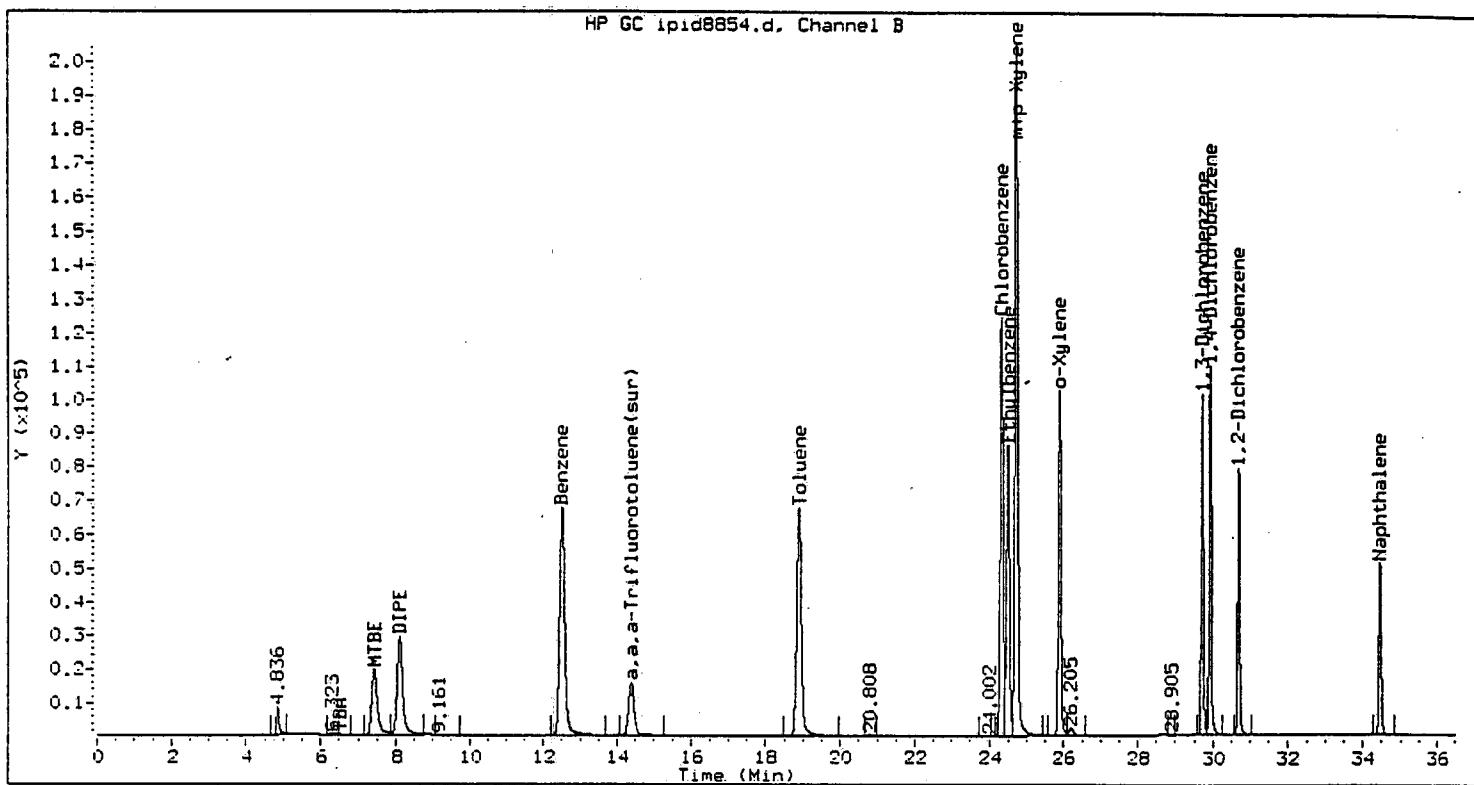
Sample Type: CALIB 4

## CONCENTRATIONS

**ON-COLUMN FINAL**

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
o-Xylene	25.884	25.884	0.000	1242112	19.516	19.516
m+p-Xylene	24.712	24.712	0.000	2783095	39.009	39.009
TBA	6.559	6.559	0.000	526768	1960.958	1960.958
MTBE	7.424	7.424	0.000	548079	20.011	20.011
DIPE	8.106	8.106	0.000	789385	20.338	20.338
Benzene	12.497	12.497	0.000	1629020	19.883	19.883
Toluene	18.888	18.888	0.000	1475232	19.505	19.505
Chlorobenzene	24.323	24.323	0.000	1603541	19.812	19.812
Ethylbenzene	24.489	24.489	0.000	1194144	19.603	19.603

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	4025207	58.524	58.524
1,3-Dichlorobenzene	29.717	29.717	0.000	975549	19.744	19.744
1,4-Dichlorobenzene	29.931	29.931	0.000	1119237	19.887	19.887
1,2-Dichlorobenzene	30.690	30.690	0.000	771772	19.843	19.843
Naphthalene	34.464	34.464	0.000	525495	18.248	18.248
a,a,a-Trifluorotoluene(sur)	14.385	14.385	0.000	850961	30.542	30.542



Method : /chem/VOAGC3.i/602/10-03-00/03OCT00.b/602\_00.m

Sample Info : ISTD040

Lab ID : ISTD040

Inst ID : VOAGC3.i

Inj Date : 03-OCT-2000 11:03

Dil Factor : 1

Operator : SP

Sample Matrix : WATER

Cpnd Sublist: all

Sample Type: CALIB\_5

Compounds	RT	EXP RT	DLT RT	CONCENTRATIONS	
				ON-COLUMN	FINAL
o-Xylene	25.884	25.884	0.000	2464774	38.725
m,p-Xylene	24.713	24.712	0.000	5572655	78.109
TBA	6.509	6.559	0.050	5319	19.801
MTBE	7.424	7.424	0.000	1027527	37.517
DIPE	8.107	8.106	0.001	1540563	39.692
Benzene	12.497	12.497	0.000	3252739	39.701
Toluene	18.887	18.888	0.001	2941187	38.887
Chlorobenzene	24.323	24.323	0.000	3223275	39.824
Ethylbenzene	24.489	24.489	0.000	2389404	39.224

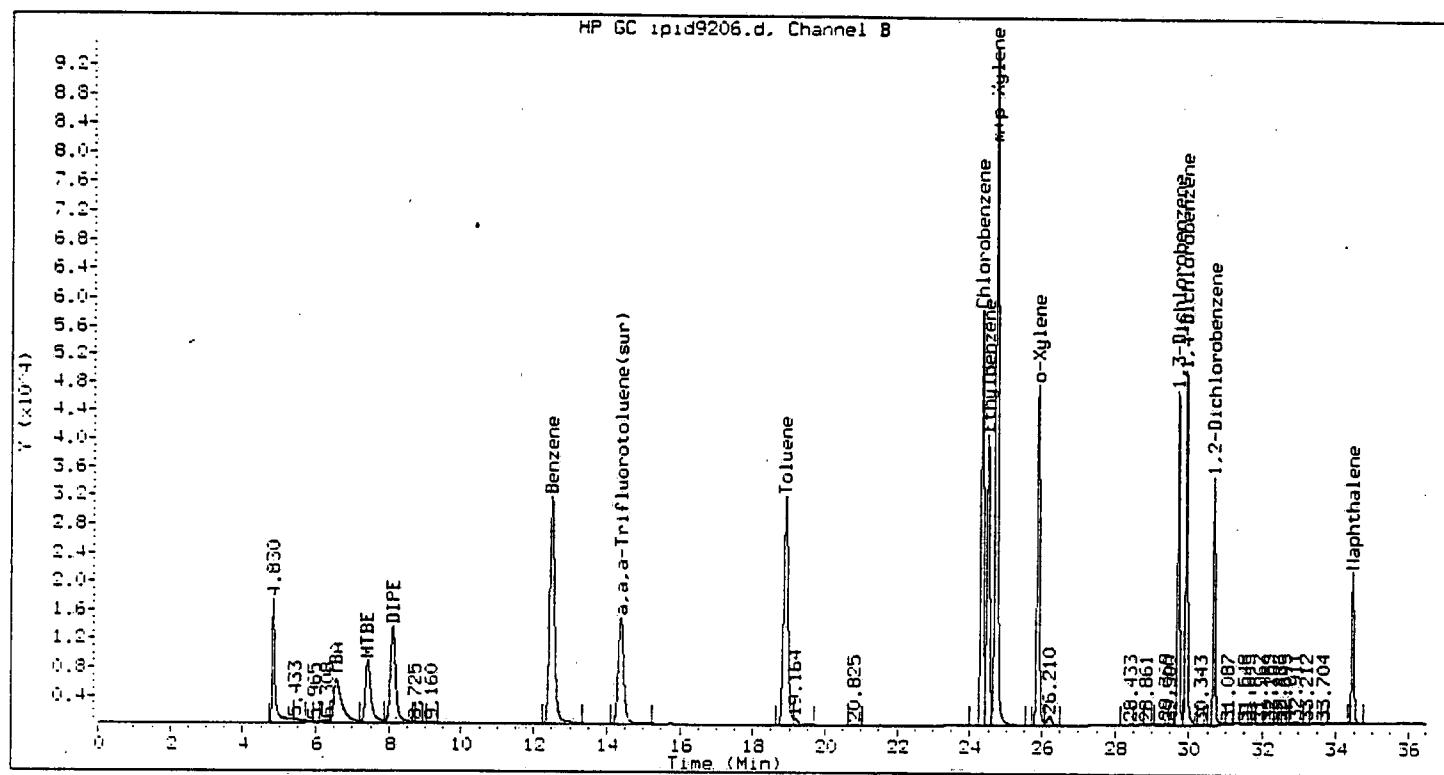
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
Xylene (Total)	25.019	25.019	0.000	8037429	116.859	116.859
1,3-Dichlorobenzene	29.717	29.717	0.000	1932355	39.109	39.109
1,4-Dichlorobenzene	29.931	29.931	0.000	2117644	37.627	37.627
1,2-Dichlorobenzene	30.691	30.690	0.000	1524709	39.202	39.202
Naphthalene	34.463	34.464	0.000	1060033	36.810	36.810
a,a,a-Trifluorotoluene(sur)	14.387	14.385	0.001	847987	30.435	30.435

## VOLATILE ORGANICS CONTINUING CALIBRATION CHECK

Instrument ID: VOAGC3      Calibration Date: 11/01/00      Time: 0927  
 Lab File ID: IPID9206      Init. Calib. Date(s): 10/03/00      10/03/00  
 Heated Purge: (Y/N) N      Init. Calib. Times:      0822      1158

COMPOUND	RRF	RRF20	MIN RRF	%D	MAX %D
TBA **	268.63	233.89		12.9	50.0
MTBE	27388.55	24005.95		12.4	50.0
DIPE	38812.47	35004.45		9.8	50.0
Benzene	81931.16	75926.60		7.3	23.0
Toluene	75633.94	67375.20		10.9	22.5
Chlorobenzene	80938.47	75865.35		6.3	19.5
Ethylbenzene	60917.12	56293.60		7.6	37.0
Xylene (Total)	68779.05	61918.80		10.0	50.0
1,3-Dichlorobenzene	49409.77	45214.60		8.5	27.5
1,4-Dichlorobenzene	56280.49	48649.10		13.6	30.5
1,2-Dichlorobenzene	38893.16	34105.00		12.3	32.0
Naphthalene	28797.51	23368.05		18.8	50.0
a,a,a-Trifluorotoluene(sur)	27861.95	26254.27		5.8	20.0

\*\* TBA Continuing Calibration Level is RF2000.



Method : /chem/VOAGC3.i/602/10-03-00/01NOV00.b/602\_00.m

Sample Info : ISTD020

Lab ID : ISTD020

Inst ID : VOAGC3.i

Inj Date : 01-NOV-2000 09:27

Dil Factor : 1

Operator : SP

Sample Matrix : WATER

Cpnd Sublist: all

Sample Type: CCALIB\_4

#### CONCENTRATIONS

#### ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
o-Xylene	25.883	25.883	0.000	1149536	18.061	18.061
m,p-Xylene	24.712	24.712	0.000	2565592	35.960	35.960
TBA	6.556	6.556	0.000	467786	1741.390	1741.390
MTBE	7.420	7.420	0.000	480119	17.530	17.530
DIPPE	8.101	8.101	0.000	700089	18.038	18.038
Benzene	12.495	12.495	0.000	1518532	18.534	18.534
Toluene	18.887	18.887	0.000	1347504	17.816	17.816
Chlorobenzene	24.322	24.322	0.000	1517307	18.746	18.746
Ethylbenzene	24.488	24.488	0.000	1125872	18.482	18.482

Compound	RT	EXP RT	DLT RT	CONCENTRATIONS		
				ON-COLUMN	FINAL	(ug/L)
Xylene (Total)	25.019	25.019	0.000	3715128	54.015	54.015
1,3-Dichlorobenzene	29.715	29.715	0.000	904292	18.302	18.302
1,4-Dichlorobenzene	29.929	29.929	0.000	972982	17.288	17.288
1,2-Dichlorobenzene	30.687	30.687	0.000	682100	17.538	17.538
Naphthalene	34.460	34.460	0.000	467361	16.229	16.229
a,a,a-Trifluorotoluene(sur)	14.385	14.385	0.000	787628	28.269	28.269

## VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Matrix: WATER      Level: LOW      Lab Job No: F165

	LAB SAMPLE NO.	SMC1 #	SMC2 #	OTHER	TOT OUT
	=====	=====	=====	=====	====
01	IG306	93			0
02	238249	97			0
03	238250	96			0
04	238251	96			0
05	238252	97			0
06	238253	97			0
07	238254	98			0
08	238254MS	98			0
09	238254MSD	97			0
10	238255	94			0
11	238256	98			0
12	238257	98			0
13	IG306A	98			0
14	238258	98			0
15	238259	97			0
16	238260	98			0
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

## QC LIMITS

SMC1 = a,a,a-Trifluorotoluene (72-122)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D System Monitoring Compound diluted out

VOLATILE SPIKE RECOVERY SUMMARY  
METHOD 602

Matrix: WATER

Matrix Spike - Lab Sample No.: 236151

Level: LOW

MS Sample from Lab Job No: E821

QA Batch: 7109

Compound	MS % REC.	BS % REC.	LIMITS
Benzene	91	95	39-150
Toluene	88	95	46-148
Chlorobenzene	88	95	55-135
Ethylbenzene	88	95	32-160
1,3-Dichlorobenzene	80	95	50-141
1,4-Dichlorobenzene	80	85	42-143
1,2-Dichlorobenzene	78	90	37-154

\* Values outside of QC limits

Spike Recovery: 0 out of 14 outside limits

COMMENTS: \_\_\_\_\_

VOLATILE SPIKE RECOVERY SUMMARY  
METHOD 602

Matrix: WATER

Matrix Spike - Lab Sample No.: 238254

Level: LOW

MS Sample from Lab Job No: F165

QA Batch: 7111

Compound	MS % REC.	BS % REC.	LIMITS
Benzene	98	95	39-150
Toluene	98	90	46-148
Chlorobenzene	98	95	55-135
Ethylbenzene	98	95	32-160
1, 3-Dichlorobenzene	100	100	50-141
1, 4-Dichlorobenzene	92	90	42-143
1, 2-Dichlorobenzene	98	95	37-154

\* Values outside of QC limits

Spike Recovery: 0 out of 14 outside limits

COMMENTS: \_\_\_\_\_